

Patterns of Professional Education

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McGlothlin: PATTERNS OF PROFESSIONAL EDUCATION

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TO NELL

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FOREWORD

of instruction, the qualities sought in their faculties, the criteria and procedures used in the recruitment and selection of students, the way the professional schools are related to the university, and the procedures followed in accrediting the programs. He directs special attention to the efforts made to give instruction in professional ethics.

From this analysis he identifies several critical assumptions common to most programs of professional education that have not been adequately tested nor based on relevant facts. He suggests the kinds of studies which need to be made to provide a sounder basis for the reconstruction of programs of education for the professions, and he proposes a national conference of educational leaders in the several professions to exchange relevant experiences and to plan further developments.

The objective approach and the comparative analysis of this report are very helpful in giving to each professional school a picture in perspective, and they challenge some of the points of view and practices which are currently accepted without careful examination and without evidence. Although the author has analyzed the educational programs of only ten professions, the mode of analysis used and the problems identified will be useful to the professions which are not included in this study. I believe his greatest contribution is the impetus the report will give to professional schools throughout the country to review their educational efforts and to reconstruct the structure and processes more closely in harmony with the educational tasks they face.

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Introduction

THE origin of this book traces back to the Southern Regional Education Board established in 1949 under an interstate compact to which sixteen Southern states now subscribe. In the mid-forties, these states recognized that Southern colleges and universities must expand substantially in quality, capacity, and scope if they were to satisfy needs arising from industrial growth, burgeoning cities, and rapidly rising incomes. They recognized that the state is often too small a unit for economical planning of graduate and professional schools. In some specialized and expensive fields a few schools can serve all states without need for every state to build and operate its own. When dollars are scarce, every single one must buy the fullest possible benefit. The states believed that regional planning—for mutual use of existing schools, for planning new schools, and for raising the quality of all schools—could guide the South in building an adequate complement of colleges and universities, of graduate and professional schools, as it moved from an agricultural to an industrial economy and from a rural to an urban society. To help them plan, the states organized the Southern Regional Education Board.

It was my good fortune to work as a staff member of the Board from its inception to almost the end of its first decade. During that time, we worked with educators and practitioners of many professions—medicine, dentistry, nursing, veterinary medicine, and public health; teaching, social work, and law;

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agriculture and forestry; architecture, engineering, business administration, and hospital administration—to name a few. Since we were trying to determine what schools the South would need now and in the future and were trying to find ways of meeting the needs we identified, we came to know each other well. My admiration for the vigor and competence of the educators in the professions grew with that knowledge.

At the same time, a strange thing began happening. Because these educators and practitioners knew that I had had the opportunity of sitting with members of other professions, they began to ask me questions about the ways the other professions handled the problems they were struggling with. Some questions I could answer from the limited contacts which I had had, but on others I had no information. When I looked for studies which compared the ways in which the various professions organized and conducted their educational programs, I found little. As a result, the idea of this study began to form as a means of answering questions for which I had no answers.

My purpose, and therefore the purpose of the volume, is to describe rather than to evaluate. A critical study to define preferable educational policies and practices in the professions is needed, but its preparation must await a braver and more scholarly soul than I. What this volume attempts is description and comparison without judgment. In writing it, I have depended heavily on published studies in the professions and the excellent compilation of essays on professional education, edited by Dr. Lloyd Blauch, *Education for the Professions*. In addition, I have discussed its contents with a number of professional educators and have benefited by the generosity of a number of people who were willing to review it in draft form. Biases probably show in the pages which follow, but they have crept in against my will. My hope is that the comparisons will

throw light on some of the questions which professional educators constantly raise—What are the others doing? How are they handling this problem? What policies are they following? What methods have they found useful? Ultimately, of course, my hope is that the volume will aid professional educators in their unremitting effort to improve the work they are doing.

These pages contain descriptions and comparisons of education for only ten professions. Blauch gives information on 34. Obviously, ten does not include all the professions or even all the important professions. Nevertheless, the number had to be small enough to be manageable if comparisons were to be made, and ten is a good round figure. The choice was not wholly arbitrary, however. To some extent it was guided by personal interest, but more significantly, the ten selected include some professions which are relatively large, like nursing and engineering, and some that are fairly small, like architecture and veterinary medicine. They include some professions which are largely based on the physical sciences, some on the biological sciences, and some on the social sciences. They include some which have a long history and high prestige, and others which have a shorter history and less prestige. In sum, the ten selected show sufficient variety to include many of the problems and methods of professional education.

The ten professions fall into two major groups defined by the focus of their work. This distinction has usefulness in discussing education, for the focus affects the kind and content of professional instruction. Six of the ten professions focus mainly on people, usually working directly with them. Medicine and nursing help to cure and rehabilitate people; law helps people to resolve their conflicts; teaching helps people to modify their behavior through increasing their knowledge and skills; social work helps people offset personal disaster and restore their

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social competence; and clinical psychology diagnoses and may exorcise the neuroses of people. Although these professions often work with the environment, their major focus is on direct contact with people themselves, as patients, students, or clients, each with a problem to be solved and wishing help to solve it. Because of their focus, these professions have come to be known as "helping" professions, and this term will be used throughout the volume when needed.

Practitioners in the other four professions—architecture, business, engineering, and veterinary medicine—all work for the benefit of people, but they deal more directly with things. The engineer manipulates materials to useful ends; the architect uses building materials to enclose and condition space for human activity; the business administrator organizes and directs groups of people, but his end is to provide goods and services; and the veterinarian protects and heals animals. Each of these professions has a large human component, but each is more directly concerned with supplying goods and services which benefit people than it is with helping people directly. For this reason, I have called the second group "facilitating" professions, a term that is not in general use but which has usefulness for this volume.

Educational practices of the professions could be compared in a number of ways. The topics which form the chapters of this volume represent important areas on which information is available. They are not the only important areas, but I checked my judgment on their importance by sending lists of areas to all heads of departments or schools for the ten professions in the United States. The ones which these educators checked most frequently have become subjects of the chapters, with two exceptions. First, all the heads thought that financing of professional education is of major importance. Unfortunately,

information on this topic is simply not available. It should be. Information on comparative costs in the different fields would be of great usefulness to university administrators who are faced with making decisions on adding or continuing professional schools. But no one has made studies of sufficient scope and detail to allow such comparisons. Second, heads of the schools were less sure of the importance of investigating instruction on professional ethics, as a topic, than I am. Only on this topic does the volume run counter to their judgments on important areas for investigation and comparison.

One additional limitation needs mention. Comparisons are made only to the first professional degree, which is required for professional status. Specifically, this definition restricts the volume to describing and comparing programs leading to the bachelor's degree in architecture, engineering, business administration, nursing, and teaching; the master's degree in social work; the M.D. in medicine, the D.V.M. in veterinary medicine; the L.L.B. in law; and the Ph.D. in psychology.

Language differences among the professions can cause major difficulty in understanding. For example, what medicine calls a "preceptorship," clinical psychology calls a "clerkship," a term which means something very different in medicine. The professions could help the public and themselves by adopting a common terminology in their educational programs. At the very least, students of professional education badly need a glossary of such terms. Although I have tried to avoid confusions in terms in this volume, it is unlikely that I have fully succeeded.

After the fields were chosen and the areas for comparison defined, it was possible to prepare research memoranda, one on education for each of the professions, using the areas as topics on which to collect information. These memoranda tried

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to identify the central tendency of thought and action within each topic, whether on aims, curriculum, methods, or what have you, using literature mainly from the last five years, especially official documents and reports of the professions. Educators in the professions were generous enough to review the memoranda, suggesting needed changes.

These memoranda formed the basis for the comparisons, supplemented by other information from the professions where the memoranda were inadequate. Persons in each of the professions represented have reviewed drafts of the volume. Their comments have helped to reduce error.

As is proper for a volume on education, Chapter I describes and compares aims of professional education, and to a large extent the chapters which follow derive from it. Chapters on the curriculum, teaching methods, faculty, and students in professional education follow. These areas form the heart of professional education, and their quality determines whether its aims can be achieved. After these, the chapters on relations with the university and accrediting describe how the influence of the institution and of the profession is brought to bear upon professional education. Chapter VIII on ethics compares the ways professional education deals with this crucial objective, which seems to appear in statements of aims more frequently than it does in content of the curriculum. The final chapter is not summary but reflection, not comparisons of professional education but comments about it. Only here have I permitted myself to break out of the limits of description.

It is my hope that educators for the professions who read this volume may profit from information it provides, however imperfectly, on what ways other professions have found to execute their exceedingly important educational tasks. Perhaps the volume will answer some of the questions I could not.

CHAPTER 1

The Aims of Professional Education

The ideal of a university is not so much knowledge, as power. Its business is to convert the knowledge of a boy into the power of a man.

—Alfred North Whitehead

PROFESSIONAL education has grown up in response to demands of society for expert help in solving its problems, meeting its desires, and satisfying its needs. As the complexity of society increased, learning by trial and error became either too dangerous or too expensive a means of supplying society with its professional people, those persons whose special knowledge and skill greatly exceed that of the "lay" person. For a time, knowledge and skill in the professions were limited enough to be passed on from one professional to others through "apprenticeships" but this method, too, became inadequate to the task of preparing professional people. Schools were established, with the ultimate purpose of supplying sufficient professional people of high enough quality to meet society's needs. Basically, professional education has two related

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aims: one, to supply enough professional people, and, two, to assure society that they are competent to practice their professions. The first is the aim of quantity; the second is the aim of quality.

Those basic aims incorporate a number of difficult questions, which each profession must try to answer as it builds its educational programs. What, for example, is a sufficient number, and who shall determine what is sufficient? What is quality? How is the meaning of the term to be decided? Which takes precedence—quantity or quality, and who shall decide? To a large extent, these questions can be answered only in terms of the role each profession is expected to play, and these roles necessarily vary from profession to profession. Thus, statements of aims for education in the different professions will vary. The somewhat surprising fact is that the statements, in general terms, are quite similar; emphases among them differ.

1. *Professional education has one aim of providing professionally educated entrants to the professions in numbers adequate to society's needs.* This is the aim of quantity. Most of the professions expect professional education to supply most of the entrants which they need to maintain themselves against loss of members by death, retirement, and defection, and to meet expanding demands for their services. And professional education aims to do just this. Few professional educators are happy with the fact that, in some professions like law, architecture, and business administration, channels other than the schools can serve for entrance. Professional educators work to expand present schools or to add new ones whenever the number of students who wish to enter the schools exceeds their capacity. They wish to make sure that interested and qualified students can find places in the professional schools. But they are also concerned with finding ways of more accurately relat-

ing their efforts to needs of the professions. Student demand for professional education, and present and future social need are the two crucial factors which define what capacity the schools must offer.

Professional educators have not yet found a satisfactory way of deciding how many graduates the professions will need. Counting applications cannot, by itself, give the answer. Sometimes, too many qualified students apply for admission to the schools; sometimes, and in some professions, the number is not large enough. Medicine has often had more applicants than it needed; social work and teaching have often had too few. When educators ask the professions to tell them how many professional people will be needed over a period of years, they meet equal confusion. Professions know that the variables in prediction are many, and that although trends may be extrapolated, they can also be violently disarrayed by unexpected events. As a result, professions are unwilling to be specific on future needs. The effect of the Korean War on America's needs for engineers is too recent an example to give the professions much confidence in prediction. Just prior to the Korean War, a U. S. Department of Labor survey predicted an excess of engineers, only to have its prediction promptly overturned by so great a demand for engineers that it is still unmet.

But the educators continue to search for answers. They can feel fairly confident if they assume that the present size of the professions will not change. They can add the number of present vacancies to the number of practitioners who will be lost to the profession as the years pass, and arrive at a figure for the minimum number of graduates needed. In fields like social work, teaching, nursing, and more recently science and engineering, present shortages are large enough to stimulate national efforts to recruit students without worrying about future

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needs. Professional educators have not yet found a way, satisfactory to them or to the professions, of predicting future expansions or contractions in the size of professions. Consequently, they cannot decide with confidence what size and number of schools will be needed. They know that the population of the United States will continue to increase. They know that student bodies as a whole will expand as the college-age population increases, and as greater proportions of that population enter the colleges. Beyond this, however, the future is vague, for they have not yet been able to construct a firm base on which to predict the future social need for a profession. Some educators make predictions by arbitrarily establishing ratios of practitioners to population, and assume that these ratios will predict future need and future demand. Others use different ratios, such as practitioners to urban population, to farm animal population, to dollars of construction or of personal income, and so on. Until a satisfactory means of predicting social need is found, planning student capacity in professional schools will probably continue to be based largely on student demand, however inadequate that measure alone may be.*

2. *Professional education has a second aim of maintaining or increasing the quality of entrants to the professions to satisfy society's needs.* The second aim of professional education—the aim of quality—guides its decisions in many of the educational choices it must make. Professional educators constantly define, refine, and redefine their aim of producing practitioners whose competence is great enough to maintain and build the professions they enter. No profession ever becomes fully satisfied with its decisions on what quality is needed, and each therefore continues the process of revision. The definition of quality today may not be the definition of tomorrow, even though

change may seem slow and halting. Every attempt at improvement, every effort at increasing the effectiveness of education, involves an effort to define with greater accuracy the qualities needed by the profession and by the society it serves.

As we have suggested, the aim of education to supply the kind and quality of graduates needed by a profession derives from the role of that profession. And that role changes as new knowledge is acquired, as the relations among the professions shift, or as the needs of society vary. Nurses, for example, now perform functions which were withheld from them almost yesterday. Advances in physics have rapidly modified the role of the engineer, changing him from military expert to applied physicist. Static roles for the professions will have to wait for a static society, unaffected by advances in knowledge, by the mobility of people, or by changed relationships among the professions.

In spite of variations, however, the professions have largely retained their fundamental roles. The physician, though delegating more and more duties to the nurse, retains his professional and legal responsibility for treatment of the ill. The lawyer adds administrative law to his concerns, but continues to represent the interests of clients in conflict with others. The architect, though newly concerned with city planning, continues to design and supervise the construction of buildings. The teacher, although called upon to aid the growth of children in a variety of directions, continues to be concerned with intellectual development and the transmission of knowledge to youth. At any point in time, therefore, although it is hazardous to define the kind and quality of professional people which society needs, it is possible because of underlying continuity of role within each profession.

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The professions vary greatly in the clarity and precision with which they define this second aim—the aim of quality. Some professions, such as architecture, law, clinical psychology, medicine, and engineering, have attained what appears to be wide agreement among their members. Others, such as nursing, business administration, teaching, and veterinary medicine have not formulated the aim in precise statements drawn from the thinking of the schools and the profession. In 1959, social work completed an elaborate process of study and discussion of the curriculum which resulted in a more precise statement of its aims than it previously had had. These differences are witness to the fact that some professions have achieved a cohesiveness and stability that make it possible for the schools to accept a general statement of an educational aim. In the other professions, the roles are either changing so rapidly that conflict over the aim of quality is inevitable, or, as in veterinary medicine, the role is so firmly established that no one feels a need for defining the aim—it is taken for granted.

Within the limitation which these variations impose, it is possible to compare the ways in which the ten professions define the second aim of professional education. Wherever possible, we have been guided by official statements of the professions, which have been hammered out by study and discussion among schools, professional associations, and practitioners. Where no such official statements are available, we have taken statements that appear to represent the major trend of a profession's thinking.

The second aim divides itself into five sets of attributes. Professional education is expected to start the student on the road toward achievement of these objectives. As a professional man, he will be expected to manifest in his professional and social life:

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sharpen the knowledge and skills obtained in the professional school. Those which are most sensitive to this fact tend to develop systematic ways in which experience can be related to education. In medicine, the internship, coming after university education has ended, serves this purpose. The period of "architect-in-training" serves the same purpose for architecture. Engineering expects industry to train its graduates in the processes used by the company in which the graduate enters employment. And according to reports from the American Society for Engineering Education, the companies prefer it this way.

A conflict of knowledge versus skills underlies these decisions. Even though each field believes that it cannot produce fully-trained practitioners, some place much more emphasis on helping students to master the elements of practice prior to graduation than do others. These professions—such as teaching, nursing, medicine, veterinary medicine, clinical psychology, and social work—customarily send graduates into practice that may require competence to accept immediate responsibility, sometimes without much chance for close supervision. Many of their graduates begin practice largely isolated from other practitioners. These graduates can turn to older hands for help at times, but often they must undertake what they have to do without much guidance. As a result, each of these professions requires a supervised field experience, practice work, clinical study, or other means to make sure that understanding of practice does not lag behind understanding of the sciences on which practice rests.

The conflict also appears in another question: should the graduate be expected to contribute immediately or should he bring with him the basis of long-term growth and ultimate high

contribution? Should he have mastered principles whose application will bring skills or should he have skills which can be of immediate service? In general, the schools prefer the long-term objective, because they are convinced that education which is sharply focused on skills will become rapidly out-of-date as processes change. On the other hand, the professions sometimes suspect that the schools have little understanding of "practical needs" and enjoy teaching students the more rarified aspects of theory to the detriment of teaching them the skills of practice.

The field of business administration exhibits the conflict with great clarity. One group of schools of business favors training students in techniques of work, through sharp specialization within undergraduate education. Some employers support this group, since they would like the schools to supply them with graduates ready to undertake the duties of specific jobs, without substantial periods of "company" training. Another group of business schools, led by the graduate schools, favors the reduction of the number of "skills" courses and of sharply specialized curricula, urging the substitution of more general courses to prepare students for "line" or management responsibilities. Dr. Robert D. Calkins, former dean of the School of Business at Columbia University, holds to the latter position. He says:

... the tasks of the business school should be to provide a fundamental professional training which, when superimposed on the other preparatory education and when combined with experience, will qualify graduates for responsible staff work, for subordinate management, and for responsibilities of top administration. . . .

1) Fundamental rather than narrow specialized preparation is required. . . .

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2) In stressing necessary fundamental preparation the intention should be to leave most of the more specialized training to be given on the job or by other agencies where it can be given better and more purposefully.⁸

But the first group seems to hold sway, for "the best undergraduate schools pitch their offerings at students with more specialized interests in accounting, insurance, market research, investments, analysis, etc."⁹

Teacher education faces much the same problem of deciding how much emphasis to place on knowledge and how much on skill. Here the conflict centers around the "Methods" courses, where the prospective teacher learns how to teach English, history, or science. These offerings in teacher education are often under attack. Critics charge that they waste the time of students by requiring them to learn "how to teach" at the expense of learning "what to teach." "Probably no aspect of the curriculum of teacher education is as controversial as that of methods courses."¹⁰ As in business administration, however, schools of teacher education are moving toward more emphasis on knowledge of principles than on the development of special techniques, the "tricks of the trade."

Nursing education in the university has also moved toward greater emphasis on knowledge and less on skills. Nursing has undertaken enlarged responsibilities whose execution requires understanding and knowledge of physical and social sciences on which nursing care rests. Dr. Margaret Bridgman is convinced that "the first requirement is the establishment of baccalaureate curricula of sufficient breadth and strength to develop proficiency for expert staff nursing in hospitals, public health agencies, and other services and to provide a sound base for graduate study, in general and profession-related content and in

nursing as the major field of concentration." * Nursing can no longer be considered a single, monolithic function. It has been required to undertake a variety of responsibilities that go far beyond those of patients' bedside care. For these, training in the hospital school is no longer adequate. Dr. Bridgman points to the clinical responsibilities devolving upon nursing as scientific and technological advances have revolutionized medical practice; to responsibility for "supportive care," in which the nurse herself becomes a therapeutic agent through understanding and satisfying the emotional needs of patients; to responsibility for an inclusive health program that ties the hospital to other agencies for public health and welfare; and to responsibility for auxiliary personnel, for whom professional nurses supply in-service training and supervision. All these changes add responsibilities that can be satisfactorily discharged only after completion of an educational program which aims toward knowledge and understanding in addition to specific skills of nursing care.¹

Medicine came to a similar conclusion somewhat earlier. Dr. Abraham Flexner's scathing denunciations of the medical "schools" of 1910 grew out of his revulsion at schools whose programs were limited to transmitting skills instead of scientific knowledge, and which were incapable of attaining even this inadequate end. To Flexner, a profession can not be satisfied with the transmission of mere skills. It must create and transmit a body of constantly increasing knowledge, achieved through research and translated into principles through scholarship and synthesis. A physician can apply principles intelligently only after mastering the sciences from which the principles had been derived. As the *Objectives of Undergraduate Medical Education* suggest, the medical student of today is

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expected to construct a "solid foundation," which is defined not as a "complete, detailed systematic body of knowledge concerning each and every medical and related discipline," but as an adequate setting in which the student can learn the "fundamental principles" of medicine, and can develop ability to apply these principles with discrimination.* Knowledge of principles illuminates the use of skills.

Engineering has moved rapidly toward substantial emphasis on the knowledge required for effective practice. As early as 1940, the Hammond *Report* urged that engineering education continue to broaden its base.

"Its roots," the *Report* stated, "should extend more deeply into the social sciences and humanities as well as into the physical sciences in order to sustain a rounded educational growth which will continue into professional life." * After defining in more precise terms the objectives which should guide engineering education, the *Report* proposed that schools abandon effort to develop specialized skills so that room could be made in the curriculum for essential knowledge. It says:

... to attain the ends indicated by the foregoing general policy . . . means minimizing purely descriptive material and repetitive tasks; it means the abandonment of effort to develop the specialized skills that are now emphasized.¹⁰

Fifteen years later, the Grinter *Report* continued to emphasize the need for mastering of scientific principles. It stated:

The first objective, the technical goal of engineering education, is preparation for performance of the functions of analysis and creative design, or of the functions of construction, production, or operation where a full knowledge of the analysis and design of the structure, machine, or process is essential. It also involves mastery of the fundamental scientific principles associated with any

branch of engineering, including a knowledge of their limitations and of their applications to particular problems. . . .¹¹

A similar emphasis on knowledge of the sciences underlying professional skills appears in architecture, social work, and veterinary medicine, perhaps somewhat less in law. Legal education in the United States is said to lead the world in its devotion to "practical training,"¹² and demands for training which can be related immediately to practice have stimulated "the setting up of so-called 'skill courses,' for example, legal writing, legal drafting, legislation and legislative process, legal accounting, fact finding, and the establishment of legal-aid clinics."¹³ Dean Albert J. Harno also discovered, however, that legal education was experimenting with ways of moving beyond the limits of skills. He says:

While there is a heavy emphasis today, as evidenced by the experiments in progress, on skill training and on "how" courses, what impresses the observer even more is the diversity of trends in modern legal education. There is a marked stress on the broader and more cultural areas—on a synthesis of the law and a fusion of legal and non-legal materials.¹⁴

Social understanding, with sufficient breadth to place his practice in the context of the society which supports it, and to develop capacity for leadership in public affairs:—Educators for the professions are not satisfied to restrict their efforts to helping students meet the technical requirements of practice. To do so, they believe, would be to limit the effectiveness of the profession. A professional man, they hold, must understand the significance and relationships of his profession. Furthermore, as he achieves status and influence within his profession he will constantly be faced with decisions which surmount the bounds of the technical knowledge of his profession and which must be

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based upon knowledge and understanding made available by many fields. In addition, as a professional man, he will be called upon for leadership in public affairs, often wholly outside his profession. At the very least, enlightened citizenship requires social understanding.

Professional educators and professional men recognize these opportunities and demands. They are convinced that the professional man must be able to contribute beyond the limits of his profession. "The objective of architectural education," the architects say, "becomes the development of architects, who, as enlightened individuals, responsible citizens, and resourceful professional men, will serve their society in attaining a worthy architecture."¹¹ In doing so, the architect must become "an agent of the best forces working toward the realization of the noblest aspirations of his society."¹² If he is to be "an agent of the best forces" he must understand the forces, since the phrase implies discrimination among them.

Engineering has defined its concern with the objective of social understanding more precisely than one might expect. The statement of the *Hammond Report* of 1940 on the objective of the "humanistic-social stem" has been reaffirmed by the *Grinter Report* of 1955,¹³ and by the document *General Education in Engineering* in 1956.¹⁴

The *Hammond Report* says:

The humanistic-social studies should be directed toward:

1. Understanding of the evolution of the social organization within which we live and of the influence of science and engineering on its development.
2. Ability to recognize and to make a critical analysis of a problem involving social and economic elements, to arrive at an intelligent opinion about it, and to read with discrimination and purpose toward these ends.¹⁵

The Grinter Report refined the Hammond statement into an eloquent paragraph:

The second objective, the broad social goal of engineering education, includes the development of leadership, the inculcation of a deep sense of professional ethics and the general education of the individual. These broad objectives include an understanding of the evolution of society and of the impact of technology on it; an acquaintance with and appreciation of the heritage of other cultural fields; and the development of both a personal philosophy which will insure satisfaction in the pursuit of a productive life and a sense of moral and ethical values consistent with the career of a professional engineer.²⁰

We have been able to find little in documents on education for the other two "facilitating" professions—business administration and veterinary medicine—which focuses on the objective of social understanding.

Among the "helping" professions, medicine defines a fairly limited objective by calling for the attainment of "clinical and social skills necessary to the best use of that [professional] knowledge."²¹ But the other "helping" professions place considerable emphasis on social understanding and leadership. Clinical psychology accepts the objective of social understanding as necessary to practice, since it is unwilling to place the benefit to an individual client above that of his society. Social work calls for the development among its students of "social consciousness and social conscience."²² When law calls for its schools to educate students to be able "to assume direction of all phases of the areas of personal conflict inherent in a complex society and economy."²³ it is asking that graduates have an understanding of social problems and the competence to lead to their solution. Nursing wants graduates who are "inter-

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ested in and understand current social, political, and economic problems and issues."¹⁴ And during the period when the American Association of Colleges for Teacher Education was an accrediting agency it approved those colleges whose professionally educated graduate:

Expresses carefully considered rather than impetuous judgments of public events. Views his own affairs and those of this profession in the light of a real understanding of the social, economic, and political factors operating in his community, nation, and world.¹⁵

Social understanding is therefore an important objective of education for most of the ten professional fields.

Personality characteristics that make possible effective practice and effective living:—Another common objective of professional education, falling under its aim of quality, is to shape the personalities of its students into a professional mold. At this point, the objective of professional education departs from the objectives of general education, which is more concerned with helping the student toward self-realization in whatever directions this may take him. To be sure, general education expects that its students will choose reason over prejudice, skepticism over gullibility, knowledge over ignorance. But the limits within which it affects the characteristics of its students are broader than those of professional education which is necessarily concerned with developing characteristics essential to practice of a profession. "A profession has an ideology, an ethic system," says Charlotte Towle, "by which its members are inspired and governed. A student entering a profession has both the need and the wish for a set of values to give direction and limits to his striving. What I am to think and feel in order to act as I should is a prominent anxiety of a neophyte in a profession."¹⁶

To some extent, he who chooses a profession chooses a personality.

For one thing, professions have sets of values, an ethic, an ideology, which lie at the heart of their activities. Almost all discussions of the professions emphasize what Flexner called their "altruism,"; Tyler, their "recognized code of ethics,"; Lewis and Maude, their "professional ethics."¹¹ "Most emphasis in defining professionalism has been laid upon standards of conduct—professional ethics."¹² To inculcate a sense of professional ethics is an almost universal objective of professional education. Engineering states the objective as "the development of both a personal philosophy which will insure satisfaction in the pursuit of a productive life and a sense of moral and ethical values consistent with the career of a professional engineer."¹³ Education for architecture is designed to help the student develop character of "integrity above suspicion," undaunted perseverance and courage, and willingness to fulfill "in letter and spirit his broad responsibility to client, profession, and society, to seek always the highest quality of achievement."¹⁴ Legal education, oddly enough in light of the profession's vigorous enforcement of its Canons, does not state inculcation of ethics as an objective, though it includes the subject in courses and has compiled case books for courses in ethics. Harno points out, however, that "The lawyer . . . must have a deep sense of social responsibility . . .,"¹⁵ and this may be considered to reflect the profession's concern for ethical conduct in practicing the profession.

Medicine, with its power over life and death, has recognized the need for ethical practice over the centuries. It requires that the student must be helped to adopt "ethical or moral principles which are essential if he is to gain and maintain the confidence and trust of those whom he treats, the respect of those with

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whom he works and the support of the community in which he lives." ²² Teaching, through the National Education Association, has formulated an ethical code to guide the professional conduct of teachers, and its accrediting standards include a requirement that the professionally educated teacher "has learned to identify issues of moral choice involved in his personal and professional life and has developed ethical principles and spiritual resources to guide his actions." ²³ With the possible exception of business administration, each of the ten professional fields sees ethical conduct as an essential objective of its educational program.

A number of the professions have set for themselves a broader objective than ethical practice for graduates of their schools. They hope that the graduates will have attained what might be called a "professional personality." This objective is particularly significant for the "helping" professions, which are concerned with the interactions between the professional person and the recipient of his services. The quality of the interaction, and thus the effect of the service, may depend as much upon the personality characteristics which the professional person has acquired as upon the knowledge which he has mastered. Professional schools therefore set for themselves the objective of guiding the students toward a desirable "professional personality" as well as toward needed professional knowledge and skill.

This objective can perhaps be seen most clearly in clinical psychology. Some form of intensive self-evaluation—either psychoanalysis or a shorter method—is considered helpful in the training of a clinical psychologist, since without relatively complete self-understanding the psychologist may be trapped into projecting his own needs onto his client. Therefore, the Committee on Training in Clinical Psychology says:

We are not prepared to recommend any special form of such procedure, although some of us believe that whenever possible this should take the form of psycho-analysis because of its relative completeness. Others of us believe that shorter methods of self evaluation, because they may be less time-consuming and less indoctrinating, are preferable. Whatever the form, training should include detailed self-examination under the competent guidance of persons relatively free from dogma who have an interest in psychological theory as well as in therapy.^{**}

In social work, as in clinical psychology, professional education is deeply concerned with the personality characteristics of its graduates. Charlotte Towle, in defining the aims of professional education, points out that "Our second aim . . . is to develop feelings and attitudes that will make it possible for the student to think and act appropriately,"^{**} and throughout her excellent and penetrating volume, Miss Towle continues to make this concept more and more explicit. For example, she says, "The responsible professional worker cannot permit himself the comfort of becoming deeply unconscious of self. He must always be consciously attentive to the import of his activity,"^{**} yet "Social work, by its very nature, needs workers who have considerable capacity to live beyond absorption in self and who are potentially creative. . . . The capacity is revealed in the educational process through a liking and concern for people as individuals when they, in the midst of disadvantageous circumstances, are often least likable."^{**} The social worker uses his self as an instrument in his practice. Social work education aims toward helping him build an effective self. To do so, social work education must make sure "not only that students acquire new attitudes but that they also often relinquish or modify old ones."^{**}

Teacher education also recognizes the significance of per-

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sonality characteristics. One effort, at least, defines the quality of being "personally desirable," as essential to the good teacher. This quality includes "likes to work with children; demonstrates a warm, outgoing personality; inspires emulation by children; is emotionally mature, physically fit, patient, and understanding." ⁴⁴ Students who do not or cannot exemplify these qualities are encouraged to seek other fields. ". . . a teacher-education program," says Donald P. Cottrell, "to support a free society has clear objectives in terms of persons who behave or respond in certain ways, who can do certain things, and who exert certain kinds of influence upon others. The program is designed to produce a certain kind of human product, rather than merely to conduct a tour through certain marked territory for students, letting them make whatever interpretations and draw whatever conclusions they please." ⁴⁵ What is wanted is a professionally appropriate personality.

Of the other helping professions, few seem to have defined the aim of the professional personality, the use of self, precisely enough to allow quotation. Their concern with it in instruction will appear later in discussion of the curriculum.

We have considered the aim of quality in professional education as it is expressed in concern for professional competence, social understanding and sensitivity, and an adequate "professional personality." We have seen that many of the ten professions are concerned with all of these, some more intensely than others. Two other attributes in the aim of quality remain—zest for continued study, and competence in conducting or interpreting research. Again we shall find that the professions vary in the emphasis they put on these objectives, and the precision with which they state them.

J *Zest for continued study which will steadily increase knowledge and skill required by practice:*—"It is the nature of a pro-

session, which by definition requires the continuing enhancement of competence, that education for its practice is for each member a lifelong obligation." ⁴¹ None of the ten professions believes that education of a professional person is completed when he receives his degree. The architect, for example, must accept the responsibility "To improve his own competence and that of his profession by increasing and sharing architectural knowledge." ⁴² The legal profession says that "The education of a lawyer is a life-time undertaking." ⁴³ Social work "endeavors to set in operation a learning process that will endure and wax strong throughout the years of professional activity." ⁴⁴ The Code of the nursing profession insists that "The professional nurse must not only be adequately prepared to practice but can maintain professional status only by continued reading, study, observation, and investigation." Engineering concurs. "Education for the profession of engineering does not stop with the acquisition of a degree; it must continue throughout life. Hence, one of the significant goals of engineering education is to motivate the student to learn on his own initiative." ⁴⁵ Teacher education has an objective to produce professional people who "possess competence characterized by . . . continued search for truth." ⁴⁶ Not all professional people can undertake research. Their competences and their interests may lie elsewhere. But all are expected to continue to study while they practice. One clear objective of professional education is to provide its graduates with the desire, the zest, to continue to study. For nursing, at least, the Code of Ethics obligates the practitioner to add steadily to his knowledge. The professional school has its own obligation to stimulate and encourage its graduates to become lifelong students.

Competence in conducting or interpreting research so that he can add to human knowledge either through discovery or

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application of new truths:—The objective of continued study need not include the objective of conducting research, and the professions are by no means uniform in their belief that professional education for practice should also attempt to develop competence to conduct research. Professions like engineering, architecture, business administration, law, and veterinary medicine believe that a student can acquire research competence only by further academic study, and that the degree required for entrance into the profession cannot easily be made to represent competence to conduct research as well as competence to practice. Their objectives are directed toward practice, and their emphasis tends toward the "clinical" rather than the "experimental." And yet it is an amusing foible of language that the profession whose education places most emphasis on competence in research is *clinical psychology*. Here the objective of research competence is so strong that it has required a four-year period for the doctor's degree, and has prevented establishment of separated professional schools of clinical psychology. It has made the phrase "First a psychologist, then a clinician," into a cliché by its overuse to emphasize the fact that the graduate education of psychologists for clinical practice has a fundamental objective of giving them competence in research. Competence to practice is added, largely through the internship. Clinical psychology, however, is not alone in setting research competence as one of its objectives. Medicine has a similar though less emphatic expectation. It believes that "By the time a student has completed his undergraduate medical program, he should have developed a genuine spirit of curiosity and be in possession of methods of study which foster the accumulation of facts that lead to new knowledge and the wisdom to utilize it."⁴⁷ Social work states "the objective of developing and in-

trenching the spirit of scientific inquiry,"⁴³ and teacher education holds that "The Competent Teacher . . . is intellectually curious. . . ." He continues "to grow professionally throughout his teaching career. Does simple classroom research."⁴⁴

The aims of education for the professions vary in emphasis. All are designed to produce professional competence. As might be expected, the "helping" professions are somewhat more concerned than the "facilitating" professions with social understanding and considerably more with the use of self as an instrument of practice. All professions are convinced of the need for infusing the graduate with the zest for continued study. Clinical psychology puts an unusual, almost unique, emphasis on the production of a research man in the person of the practitioner, but other professions are also interested in stimulating concern with research and the advancement of knowledge as a professional obligation. With almost no exception, the professions expect education to help produce persons who will practice in accordance with ethical principles that have been adopted by the profession, although, some, such as business administration, are hampered by the lack of an accepted code. Perhaps the similarity of aims is more striking than the differences. And it is significant that the aims are not limited to bare professional competence. If the aims can be interpreted, they mean that education for the professions is designed to create practitioners who are competent to discharge their social obligations, their responsibility for leadership, their duty to grow in usefulness through continued study and research, as well as their professional tasks. Professions do not limit their educational aim of quality to success in purely professional pursuits. All of them aim for much more than that.

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It is this breadth of aim which makes it seem possible for the professional school to find its place within the confines of the university. Because of this breadth, the professional school has sought the university, and the university has often welcomed it. Insofar as aims go, the conflict between professional education and liberal education would seem to be more verbal than real. Even the objective of professional competence requires that professional education press more and more closely into the realms of the arts and sciences. As it does, the basis for conflict becomes more tenuous. Social understanding, ethical sensitivity, zest for continued study, and advancement of knowledge through research are all objectives of professional education. They are objectives of other parts of the university also.

But conflict does occur. Sometimes it smoulders; sometimes it burns brightly. If the aims of professional schools and the aims of the university were in sharp opposition there would be little hope of resolution. Fortunately, the conflict must arise elsewhere—in the interpretation of the relative importance of the objectives through that most difficult and crucial part of educational programs, the curriculum. Unless the supporters of liberal arts wish to claim the entire curriculum, the basic issue rests on its division into professional experiences and those whose focus is more directly, perhaps, on social understanding, ethical conduct, and the advancement of knowledge. Decisions on the curriculum turn statements of aims into educational programs. They sometimes turn words into battle flags. The curricula of professional education are therefore well worth looking at.

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CHAPTER 2

Curriculum

What we should aim at producing is men who possess both culture and expert knowledge in some special direction.

—Alfred North Whitehead

INTRODUCTION

MANY of the issues which swirl around higher education are related to the curriculum, for here choice is inescapable. If for no other reason, choice is forced upon the schools by the constant extension of knowledge, so that no curriculum can comprise the whole of learning. The days of the University of Bologna when the entire legal curriculum was defined by the content of the books and glosses of canon law and civil law, read by the teacher during lectures to the students, are gone forever. Even that prescribed curriculum encompassed ten years! * The pressure of knowledge against the curriculum is a constant force requiring change, since each addition to knowledge may be of such significance that to omit it is to leave the student without crucial understanding. So long as discovery of knowledge continues, curricula will be pressed to change, to incorporate the new and to relate it to the old.

Change would be simple if it could be accomplished merely

through addition. If new knowledge could be presented by adding new learning experiences without changing those already in the curriculum, the problem of incorporating new knowledge could be easily resolved. Choice would not be necessary. But such a course is hardly feasible. The time a student has is limited. He presses forward to take his place in society, and would reject curricula of indeterminate and constantly increasing length. Funds, too, have their limit. Neither the student nor the society could support curricula which lengthened beyond its capacity to pay. It is true that professional curricula have been lengthened as knowledge has increased and as employers in government, industry, and education, among others, have given more and more preference to persons with greater lengths of education than they had in the past. The point is that some limit is set. Wherever it rests, it stands somewhere this side of all knowledge. The limit forces choice.

If choice must be made, we can hope that it will be made with intelligence and consistency. To do so, we must have criteria by which to judge the validity of change, since change without purpose may be worse than no change at all. Here the significance of prior decisions on aims becomes clear, for the choices in curriculum find their guides in the aims of the education program. The aims help to determine whether knowledge must be incorporated as consonant with the purposes of the program, or whether it must be rejected as merely an interesting diversion. Aims determine choice between areas of knowledge, since the limited time of the curriculum allows room only for that knowledge which will help students move most rapidly and effectively toward the aims.

"What do we want to accomplish?" is a question which must be asked about every curriculum change. But a satisfactory answer here is not enough. "Can it be accomplished?" is a sec-

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ond, equally important question. It applies to the content of the curriculum—the areas of knowledge—since there is little use in including areas in which the school cannot help the student to achieve mastery. It also applies to the organization of the curriculum, for the ways in which the various experiences of the curriculum are related may determine whether the aims can be accomplished. Let us look at what is involved in answering both of these questions.

Chapter I has defined the kinds of aims which professional education has adopted. Briefly restated, professional education has the purpose of developing practitioners who are competent, who have social understanding, whose personalities have been molded to their tasks, who have a zest for continued study, and who can interpret and conduct research. The second, fourth, and fifth of these aims are also the aims of university study as a whole. The first and third are defined by the profession to be practiced. To a large extent, therefore, the curriculum of professional education tries to reflect and achieve the pervasive aims of the university as well as the more precise aims of its own.

This is not to say, however, that the aims of general education and the aims of professional education are identical, or that the aims of general education predominate in professional education. As we have seen, professional education, if it is to have validity, must help to supply competence to practice. It cannot do less, and have meaning or significance. As Dr. Hollis Caswell has put it:

Each profession and vocation has within it certain levels of performance which have been achieved over years of development. The person aspiring to enter a profession or a vocation is expected by society to meet these professional requirements for performance. These requirements are a primary determinant of the organization

and of the content of the curriculum directed at professional and vocational objectives."

Even though "professional requirements" are a "primary determinant" of the curriculum in professional education, social understanding and competence in leadership are secondary "determinants," and cannot be ignored. Nevertheless the professional school cannot abdicate its responsibility for providing competence to practice, and remain a professional school.

It is here, of course, that the major conflict over the professional curriculum arises. Its attackers imply that the professional school, by focusing on competence to practice, will produce trained robots who can perform set tasks with skill, but who will have little understanding of the significance or relationships of their efforts to human welfare. Those professions which commence their professional curriculum after two or more years of college work, such as veterinary medicine, medicine, and law, blunt the attack by implying, at least, that their students achieve social understanding prior to entrance into the professional school. This solution is similar to the creation of a general college in the first two years of undergraduate programs, to assure some similarity of curriculum for all students, professional or other. Undergraduate professional schools sometimes meet the attack by slogans, like "first an educated man, then a forester" (or teacher, or nurse, or engineer, or architect) which seems to imply that the aim of professional competence is secondary to the aim of social competence and understanding. It is not. But the schools do more than make slogans. As we shall see, they express their concern with the objectives of general education by devoting substantial amounts of time in the curriculum to general education. To

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some, the amounts are too small, and the attacks are therefore justified. Regardless of the validity of the attacks, one of the many points at issue in the curriculum is the relative amount of time devoted to professional competence and social understanding. This is an issue of content and we shall later look at some of the ways by which the different professional fields approach its resolution.

Issues concerning content of the curriculum are present in both the general education and professional education parts of the student's learning experiences. In general education, the issue of breadth *vs.* depth has not yet been resolved. In reaction against the sharp divisions among traditional courses, some colleges have established multi-disciplinary introductions to broad fields, such as physical science or social science. But these courses have their problems too—of superficiality, internal stress, and expense. In professional education, the issue of skills *vs.* principles is not yet decided, although a constantly growing body of knowledge, matched with changing practice, has pushed the choice toward principles and away from skills.

Even if all the issues of content were settled, problems of organization of the professional curriculum would cause discussion and even controversy. There are issues of *sequence*, requiring decisions about what comes first, and what comes second, being built upon the first. For example, should application of principles through field or clinical instruction follow the study of theory, as it has normally done in the study of medicine, or should it parallel the study of theory, as it has often done in social work through what social work calls "concurrent" field experience? Should the general education component of the professional program be completed and done with before introduction into the professional subject-matter, or should it, too, parallel professional study? What ordering prin-

ciple should be followed—from simple to complex, from known to unknown, from familiar to unfamiliar, from principle to practice, from problem to principle, from past to present, or from present to past? Or should the sequence be drawn from the interests and needs of students, so that it varies for each class and perhaps for each individual?

There are also issues of *relationship*, requiring decisions about how the various experiences of the curriculum at any one point in time are designed to reinforce and support one another. For example, it may be impossible for formal classes in English composition to overcome poor writing of students unless teachers of other classes are also concerned with improving written work. Efforts to draw disparate courses into broad fields, taught by groups of faculty from related subjects, have grown from recognition that knowledge must be related to be used, and that the solution of any problem requires knowledge from several fields. If the student is to make the most progress possible toward the behaviors which the aims of education set, his various experiences must ultimately be drawn into consistent and integrated patterns of behavior. He will accomplish this goal himself to some degree, but he will be greatly aided in moving toward it if the curriculum is consciously designed with an understanding of its internal relationships. The problem becomes most severe apparently, when the subject matters and the controls belong to different departments of a college or university. Professional schools sometimes despair of attaining a curriculum which is related internally unless they control it all. To do so, they begin teaching all subjects they wish their students to have, hoping in this way to make certain that relationships among subjects are made clear and fruitful. The issue gets expressed in budget and staff, and organization of the curriculum defines organization of the university.

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The main issues of curriculum are then *content*, or what to teach, and *organization*, or how to put together what is taught. Professional schools reach their answers on the basis of their aims, their traditions, the requirements of their practice, their understanding of the process of learning, and the policies of their universities. It is no surprise that they do not always reach the same answers.

LENGTH AND LOCUS

Length

The professional fields have found different answers to the question of length. All the fields now require a minimum of high school graduation and entrance into college to begin professional study. Beyond that point, however, the fields range from the four years required for a degree in engineering, business, nursing, and teaching, to the six years required for a degree in law, social work, and veterinary medicine, the seven years required in medicine, and the eight years required in clinical psychology. Architecture requires five years, but adds three more for the internship (which it calls "architect-in-training") before full entrance into independent practice, making a total of eight years. Medicine requires a one-year internship after graduation and before practice, giving it a total of eight years. These lengths are stated minimums, not maximums. Within these standard lengths, the actual time spent by students in obtaining their degrees may vary greatly. In engineering, although the curriculum is nominally four years in length, it is unusually heavy, averaging about 140 semester hours or something like 4½ years' work, even if no work is repeated or made up.* In fact, the committee which prepared *General Education in Engineering* found one engineering

school in which only one member of the graduation class had actually finished his work in the four years.*

Length of the curriculum is also determined by pre-professional requirements. Of the five professions whose professional work begins some time after the freshman year in college, two—medicine and veterinary medicine—have recognized pre-professional curricula which must be completed satisfactorily prior to entrance into professional school. These are fields in which competition among students for entrance has been keen, making it feasible to require special preparation. Medicine and veterinary medicine, as fields in great demand by students, have increased the length of their curricula by selecting students who have had more than the customary pre-professional training. Most students are now entering medical school with four years of pre-professional training rather than the three years required by the standard.* A number of students of veterinary medicine enter after four years of college rather than the two required. Clinical psychology and social work have not as yet established pre-professional requirements other than a bachelor's degree, partly, perhaps, because student demand has not always been high, but partly because of their belief that breadth of background is more useful than specialized prerequisites.

In some fields, questions of length continue to plague the profession. Engineering educators have debated the length of the engineering curriculum for years, recognizing that its great weight approaches five years and perhaps should be recognized as being of this length. But only 17 of the more than 200 engineering schools require five years for the undergraduate curriculum in one or more fields.* Teacher education has moved toward the master's degree, at least for secondary school teachers. To some extent the four-year collegiate nursing program competes with the three-year hospital program in nursing. At

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Johns Hopkins University, an experiment is under way to shorten the years required for medical education. In most of the professions, however, the length is fairly well standardized.

Locus

Obviously the professions vary also in where the curriculum is located. Schools for five of the ten professions accept students from high school, and are therefore wholly undergraduate. These are architecture, business, engineering, nursing, and teaching. Three of the ten are intermediate, in that they require two to three years of undergraduate work, after which entrance into professional school follows. These are law, medicine, and veterinary medicine. Two are graduate, requiring a bachelor's degree before entrance. They are social work and clinical psychology. The degrees awarded for successful completion of professional curricula to some extent reflect the locus of the program. All the undergraduate programs lead to a bachelor's degree, with considerable variation among the professions and even within a profession as to which bachelor's degree is awarded. Social work leads to a master's degree and clinical psychology to a doctor of philosophy degree. Law, medicine, and veterinary medicine all have special degrees—law usually leads to a bachelor-of-laws degree, the LL.B., though a few schools award the degree of *Juris doctor*, the J.D.; medicine leads to the doctor of medicine, the M.D.; and veterinary medicine leads to the doctor of veterinary medicine, the D.V.M.

CONTENT

General Subjects vs. Professional Content

It is not possible to compare the actual content of the curricula of the various fields of professional education. Each field must choose experiences which fit the requirements of its prac-

tice. But each has decisions to make that are common to all fields. The first of these is how much of the curriculum should be devoted to general education, and how much should be retained in professional subject-matter.

This issue is most pressing in the undergraduate fields, those which require only a bachelor's degree for entrance into the profession. It is somewhat less severe for fields whose students enter professional schools only after several years of undergraduate work, such as veterinary medicine, law, and medicine. Here the college work is expected to provide substantially all of the general education a student obtains, and the professional schools feel little obligation to supplement it. It is least severe in wholly graduate fields of social work and clinical psychology, for they transfer the obligation to the undergraduate college. Neither field requires a specified undergraduate curriculum.

In the undergraduate fields, however, the pressures for expansion of professional courses in order to incorporate new knowledge, create a continuing temptation to reduce the amount of time and attention devoted to general courses. Some of the professions have arbitrarily set percentages of time which they encourage their schools to devote to general courses. Architecture proposes the least percentage. Its national study suggests that "The architecture curriculum . . . should offer opportunity for general cultural education. . . . Perhaps 10 per cent might be arbitrarily set as a just proportion for this purpose."⁶ Actually the architecture schools do somewhat more than this. Sanders found in 1951-52 that 33 architectural schools devoted about 8 per cent of the average curriculum to social sciences and humanities, about 4 per cent to communication arts, and another 4 per cent to liberal arts electives, making a total of 16 per cent.⁷ Even eliminating the communication arts on the assumption that they cannot be described as "gen-

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eral cultural education" leaves the possibility of 12 per cent for general education content, if liberal arts electives are chosen.

Engineering has also considered the proportion of time which should be devoted to general education. The Hammond Report of 1940 gave names to the general and professional parts of the engineering curriculum, calling the first the "humanistic-social stem" and the second the "scientific-technological stem." More recent thought has recognized that the metaphor might imply complete separation of the two parts of the curriculum, and engineering has therefore dropped the figure of speech. For the "humanistic-social" content, the Hammond Report recommended 20 per cent of the time of the curriculum, a percentage figure which the Grinter Report of 1955 reflected. This report recommends that 20 per cent of the curriculum be devoted to "humanistic and social studies," but it also provides for 10 per cent electives which again include "humanistic and social studies." Thus, a student, if he wished, could spend 30 per cent of his time on general education, under the proposals of the Grinter Report.¹⁰ Even more important, perhaps, than recommendations on fixed percentages is the conviction of leaders in engineering education that the humanities and social sciences are essential for the engineer. The Committee which prepared the excellent report, *General Education in Engineering*, speaks with vigor of the needs of the engineer for exposure to and understanding of the humanities and the social sciences. It says:

To meet his growing responsibilities and to realize his capacities as a human being, the engineer needs both professional competence and a broad understanding of himself and of the world in which he lives. He needs depth, flexibility, and a capacity for growth in directions which we ourselves can today only dimly visualize. . . . Given this view of the engineer as a professional man and as a

human being, the humanities and social sciences can take their place as an integral part of his total education. . . . They contribute to professional competence . . . in the broad sense of enabling the engineer to see his own activities in their human and social contexts, to understand his own objectives, methods, and problems in relation to the objectives, methods and problems of man engaged in other activities.

But the humanities and social sciences have a function to perform which goes beyond even this broad concept of professional development. For the engineer, as for all men, they represent the heart of our inherited human experience.¹¹

Practices of the schools do not always reflect the concerns of committees, however. An analysis of the curricula of 112 mechanical engineering schools approved by the Engineers' Council for Professional Development, published by Sanders in 1954, shows that engineering, mathematics, and physical science, take up approximately 82 per cent of the average curriculum, even when communication arts and liberal arts electives are counted with the required courses in social sciences and humanities. Sanders notes also that the average hid wide differences in practices of the schools, since the amount of time they devoted to the social sciences and humanities ranged from none whatever to 35 semester hours.¹²

For the other fields with programs leading to the bachelor's degree, precise information on the distribution of the curriculum appears to be lacking. Standards for membership in the American Association of Collegiate Schools of Business require that "At least forty per cent of the total hours required for the Bachelor's degree must be taken in subjects other than business and economics provided that economic principles and economic history may be counted in either the business or non-business groups. With respect to the latter, breadth not specialization is

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the objective."¹³ Nursing, in baccalaureate programs, expects somewhat more than business. Dr. Margaret Bridgman, in her detailed study of collegiate education for nursing, proposes that at least half of the content, equivalent to two academic years, should be "in courses other than nursing, of general educational value as well as contributing to professional development." These can be found, she believes, in the physical and biological sciences, communication skills, the social sciences, and in what she calls general education, which includes such subjects as history, economics, philosophy, art and music and so on.¹⁴

It may be surprising that teacher education requires a smaller proportion of time for professional courses than any of the other baccalaureate programs, but this appears to be the fact. *Teacher Education for a Free People* reports that "the proportion of time given to professional aspects of the program in member institutions of the AACTE (the American Association of Colleges of Teacher Education) varies widely. A study of one hundred fifty institutions shows a range of from ten to sixty semester hours in the four-year programs for prospective elementary and secondary-school teachers."¹⁵ Since the four-year program normally comprises 120 semester hours, the range of percentages would run from about 8 per cent to 50 per cent. These figures are fairly close to the proportions discovered by Clark in a survey of 68 state teachers colleges, where he found that professional course requirements for elementary education ranged from 16 per cent to 43 per cent of the curriculum, with an average of 31.5 per cent.¹⁶ In these same colleges, requirements for English, social studies, and science totaled, on the average, about 45 semester hours.

None of the professions with baccalaureate programs, therefore, ignores the need for using part of the curriculum for the

humanities, the natural sciences, and the social sciences, in other words, for general education. In architecture, the proportion is smaller than one might have expected; in teacher education, it is larger, perhaps, than many persons recognize. In all, however, the need is acknowledged. Meeting the need can cause difficulty.

The intermediate professions—law, medicine, and veterinary medicine—which require pre-professional study in college prior to entrance into professional school, have a longer time in which to provide both general and professional education, but their problem is similar to that of the baccalaureate programs. They, too, have time limitations, and their requirement of a pre-professional curriculum sometimes appears to have been established more to provide a base on which more advanced professional education can be constructed than to assure breadth of knowledge and understanding in the pre-professional student.

None of these three professions is satisfied that it has found the most desirable solution for its "pre-professional" curriculum. For law, the pre-professional curriculum does little toward defining what the student interested in law should obtain prior to his entrance into law school. Harno looks with considerable disfavor on this situation. He says:

What does all this add up to as a program of legal education? Broadly viewed, it involves three years of college work stipulated as a prerequisite for admission to a law school, this followed by three years of law study. The standards of the Association of American Law Schools state that the work taken must have been in courses with "substantive content or training," but no guidance is proffered the student as to those courses that might give him perspective on his responsibilities as a lawyer and as a citizen. Nothing is said about courses that might prepare him for the skills of the profession. Prelegal and legal education are in fact divorced from

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each other, or if not that, exist under an agreement of separate maintenance. There is no attempt at synthesis, and no cognizance is taken of the broad concept entertained by the American pioneers of legal education. The student is left to his own devices in the selection of his prelegal work.¹⁷

Dean Harno goes on to point out that "neither law teachers nor lawyers can agree on the content" of the prelaw student's college course, in spite of the fact that law schools often "deplore the substance of the college work which students have taken. The most vocal complaint is that they are deficient in English."¹⁸

Like law, medicine is unhappy with the pre-professional curriculum, not because it is too little prescribed, but because it is often too greatly prescribed. A recent study of premedical education found that:

Some colleges have a specific premedical curriculum; others have special premedical sections of regular courses; others give the pre-medical students special treatment within a course; still others require premedical students to major in a science field or department as, for example, biology or chemistry. It is clear that each of these programs came into being largely because the students, the faculty, the medical school admissions officers, of all three groups together believed it to be the program best suited for those going into medicine. Many of these special programs for premedical students are unfortunately heavily weighted with the physical and biological sciences to the partial exclusion or, in two or three colleges, the almost complete exclusion of the humanities and the social sciences.¹⁹

As a result, some graduates of premedical curricula have little understanding outside of the sciences themselves. The survey found that these programs tended "most unfortunately, to strait-jacket the student's educational experience and to divorce him from the program of liberal education which the

college provides for other students. He becomes so immersed in the subjects which he and others think will enhance his candidacy for admission to medical school that he has little or no time for the more 'cultural' courses which would broaden and deepen his knowledge of man and his institutions and give him new insights into the springs of human action and a richer understanding of human values."¹⁰ This conclusion is supported by a number of findings in the survey. For example, the survey found that "many students apply to medical school with no background whatever of study in any of the social disciplines, and that relatively few of the applicants have elected more than one or two courses in this field . . . They elect about a year's course in social science on the average—some more than this; but many, less.¹¹ But it is precisely because of these findings that the survey becomes almost a plea for broader undergraduate, pre-professional education for students who plan to enter medical school. Over-emphasis on the sciences in the college curriculum is not only undesirable; it may be socially dangerous.

What kind of education should a pre-professional student have? . . . Some [colleges] favor a broad liberal education; others, however, give their support to a policy of segregation or semisegregation of pre-professional students and their exposure to a more or less rigid and highly specialized program. . . .

. . . the Subcommittee on Pre-professional Education holds that the former affords far greater promise than the latter of developing the prospective doctor into the kind of rounded, balanced, and effective physician whom society needs . . . a doctor who is culturally ignorant would be more of a menace than another ignorant person whose position commands less respect.¹²

Veterinary medicine also depends on the college for whatever general education the student of veterinary medicine

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obtains, although it requires very little in the pre-professional curriculum. Two years are the minimum requirement for entrance into veterinary medical school, but a number of students come with bachelor's degrees. According to Dean William A. Hagan of Cornell University, all the veterinary medical schools:

... require at least 12 semester credit hours in chemistry, including at least one course in organic chemistry, at least 6 hours of zoology (biology accepted in some cases) and at least 6 hours of English. Some have additional course requirements.

All regard 60 semester or 90 quarter credit hours as the minimum total required.²²

Social work and clinical psychology, being wholly graduate fields, devote their entire attention to content related to the professional field. Neither prescribes an undergraduate curriculum which students entering professional study must have completed. For example, social work states that "The social work curriculum rests upon the assumption that the student brings to professional education a broad background of general education, including knowledge of fundamental principles in the social and biological sciences."²³ Some social work educators believe that the prerequisites should be stated with more precision, however, and the Social Work Curriculum Study has recommended that the social work curriculum extend over parts of undergraduate as well as graduate education. Clinical psychology also assumes that general education will have been completed prior to entrance into graduate school. Some graduate departments of psychology do not establish undergraduate requirements of any sort except completion of a bachelor's degree, but eleven require completion of courses in the arts and sciences before admission, ten require courses in the bio-

logical sciences, nine in mathematics, seven in physical sciences, and three in foreign languages.²⁵ None of these graduate departments has established a prerequisite in psychology itself.

If, therefore, it is possible to consider the total length of university study in social work or clinical psychology as a single curriculum, social work devotes four out of its six years to general education, or 63 per cent, and clinical psychology devotes four out of its eight years to general education, or 50 per cent. Both percentages are higher than those of most of the professional fields.

Knowledge vs. Skills

The second decision on content which every profession must make is upon the relative emphasis to place on knowledge and skills. This decision is never adequately concluded, because every addition to knowledge, every addition to skill, at some time or another knocks for entrance into the curriculum. As we have seen, the length of the curriculum is not indefinitely expandable. But knowledge, and perhaps skills, appear to be. With freedom of investigation, research keeps adding knowledge and, through knowledge, skills to our repertory. Decisions are constantly required about what knowledge and what skills to incorporate in the content of the curriculum, and particularly in what proportions.

The undergraduate fields—architecture, business, engineering, nursing, and teacher education—feel the impact of this issue more sharply than the fields with curricula of greater length. Since professional education often began as “apprenticeship,” and even after organization into schools was conducted largely by practitioners in its early stages, the initial emphasis lay upon the transmission of skills found useful in practice. But professional people soon learned that skills un-

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supported by knowledge are a shaky basis for a professional career. As research in the physical and social sciences piled up more and more knowledge, principles could be deduced from knowledge, underlying concepts could be derived from a host of specific situations, and skills could be left, in part, to be developed by the application of principles and concepts to the specific situations as they arose. No school could possibly anticipate the variety of situations that a practitioner might face in a lifetime of practice. It might reasonably hope, however, that it could equip its graduates with principles and concepts which would guide the use of skills, would serve as criteria for the selection of skills, and would supply materials from which new skills might be constructed.

Here, again, engineering has stated the issue and pointed to the solution with admirable clarity. Heir to the rapid advances of physics, chemistry, and mathematics, engineering has chosen to place greater and greater emphasis on the sciences underlying its practice, with corresponding reduction of emphasis on skills. Its latest effort to recommend directions for its schools to follow is titled a "scientifically-oriented curriculum."¹⁴ The profession reached its conclusions after three years of careful study by both engineers and industrialists, who found wide agreement that greater emphasis should be placed upon the underlying sciences and relatively less upon engineering practice. The Grinter Report says:

...the teaching of practice, as it exists today, will always be of limited use because the graduate is certain to find practice changing from year to year.

But fortunately some things do not change. Reactions, stresses, and deflections will still occur, and they will have to be calculated. Electrical currents and fields will follow unchanging laws. Energy transformation, thermodynamics, and heat flow will be as important to

the next generation of engineers as to the present one. Solids, fluids, and gases will continue to be handled, and their dynamics and chemical behavior will have to be understood. The special properties of materials as dependent on their internal structure will be even more important to engineers a generation hence than they are today. These studies encompass the solid, unshifting foundation of engineering science upon which the engineering curriculum can be built with assurance and conviction.²⁷

Working on this principle, the Grinter Report suggests an experimental curriculum distribution as follows:

	Proportion of the curriculum
1. Humanistic and Social Studies	About one fifth
2. Mathematics and Basic Sciences	About one fourth
3. Engineering Sciences	About one fourth
4. Sequence of Engineering Analysis, Design, and Engineering Systems, including the Nec- essary Technological Background	About one fourth
5. Options or Electives in (a) Humanistic and Social Studies, (b) Basic Science, (c) Engi- neering Science, (d) Research or Thesis, (e) Engineering Analysis and Design, (f) Management. ²⁸	About one tenth

The proposed curriculum represents a substantial shift away from emphasis on engineering practice. In fact, the shift is so great that Princeton University plans to scrap its old engineering buildings in favor of a new engineering quadrangle because the expanded emphasis on basic sciences in the curriculum has made it impossible to pour the wine of the new curriculum into old buildings however much renovated.²⁹

Engineering is by no means alone in its revised emphasis on the sciences underlying the skills of practice. Business schools

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have been struggling with the same issue. Here the result is not as clear as in engineering, but some teachers of business administration would like to eliminate the "tool courses," such as job evaluation, labor negotiations, advertising media, and accounting, from the curricula, and use this time for more social science.⁵⁰ Others have proposed a compromise between excluding tool courses completely and allowing them to absorb excessive amounts of the students' time. The professional curriculum would begin in the third undergraduate year, after the student had had time for general education courses—including sociology, political science, history, mathematics, and others—and the principles of economics. In the third year, the student would begin professional business education with tool courses in statistics, accounting, business law, "economics of the firm," and analysis of general business fluctuations. In the fourth year, he would take courses in the "major functional fields"—production, personnel, finance, and marketing. He would "be able to master only the elements of general management theory and policy," but would be equipped for graduate study or for his first job, without too narrow a specialization.⁵¹

Legal education has equal difficulty in the choice between emphasis on knowledge and emphasis on skills. Often, legal education in the United States has placed heavy emphasis on skills, in the drawing of legal documents, in courtroom procedures, in moot courts, and in legal aid clinics. In fact, a survey of legal education made by the United Nations Educational, Social, and Cultural Organization holds that the law schools of the United States lead the world in their devotion to practical training.⁵² Even so, there are "demands that the teaching of law must be made more practical," and this demand tends to move and hold schools to an emphasis on the "so-called 'skill

courses,' for example, legal writing, legal drafting, legislation and the legislative process, legal accounting, fact finding, and the establishment of legal aid clinics."¹² Dean Harno reports, however, that another widely-held view holds that legal education must have breadth and wide perspective. This view is responsible for the creation of more general courses "such . . . as law and the economic order, international law, law and society, welfare legislation, comparative law, and the history of the legal profession and its role in society."¹³ The pressure of expanding knowledge will probably push the law school toward the latter view, and away from over-emphasis on the practical. This, at least, is the belief of Harvard's Dean Erwin Griswold, who predicted in 1952 that "With the continuing multiplication of cases . . . theory will become more and more important in the law of the future . . ."¹⁴

In these three fields—engineering, business administration, and law—those parts of the curriculum which aim toward professional competence serve as a battleground on which the adherents of knowledge and the protagonists of skills constantly struggle for dominance. The same struggle appears in the curricula for the other fields also, although medicine and veterinary medicine have contained it by sharp division between the "pre-clinical" and the "clinical" years. But to some medical educators, at least, this truce begins to seem a Pyrrhic victory, for they observe that often the basic science departments, with full responsibility for the first two years of medical education, fail to prepare the medical student for clinical studies, and sometimes show little concern for the need to correlate their instruction with the content to be mastered in the clinical years. On the other hand, clinical teachers may encourage students to believe that medical education begins with the clinical years after sur-

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mounting the unnecessary hurdles of the medical sciences. The medical schools at Western Reserve and at the University of Florida are trying to resolve this problem in different ways, while retaining some of the division between pre-clinical and clinical years.

In architecture, a comparison of averages for the curricula of eight schools in 1898, the minimum standards for curricula adopted in 1924, and the averages for curricula of 25 schools in 1948 defines a contrary trend moving toward greater emphasis on skills. The comparison shows that by 1948 courses in design, construction, and miscellaneous technical courses, all had substantially increased, at the expense of "general courses," and of history. "The trends reflect the expanded demands and prestige of modern technology and an increased concentration on training in the solution of design exercises."²²

Social work, teaching, nursing, and clinical psychology all use practicums, field experience, student teaching, or practice to develop and establish competence in practice. But they, as the professions already discussed, struggle to decide what is the appropriate emphasis to place on acquiring specific skills. Teacher education sees the problem both in too abstract and too repetitious presentation of principles on the one hand, and too much emphasis on specific techniques and devices on the other. As one group has said:

The present plethora of methods courses in various instructional areas . . . suggests one of two situations, either of which is educationally questionable. The first is that there is undesirable repetition of work relating to educational principles . . . Rather than repeated abstract study of educational principles, meaning should be added to these basic concepts through applying them in a variety of situations.

The second situation . . . is that in which emphasis is placed on

specific techniques and devices. This, too, is a questionable practice in view of the need of today's teacher to teach by principle rather than by pattern.³⁷

Clinical psychology holds that the curriculum should be broad, and should be directed toward research and professional goals. To do so, it should emphasize general principles and critical analysis which will provide the student with a framework for quick learning and for evaluating new techniques. Psychology departments try to avoid over-emphasis on techniques, since they believe that students who depend on mastery of specific techniques may be helpless in situations where their favorite test or particular approach is not appropriate.³⁸ Nursing, as it moves more fully into the university and establishes the bachelor's degree as a requirement for teaching, supervisory, and administrative positions, is also moving its curricula toward more emphasis on knowledge and less on specific skills. Dr. Margaret Bridgman believes that the collegiate nursing curriculum "is not primarily concerned with knowledge for cultural purposes or with skills and procedures in themselves. Neither is it merely a combination of the two. Its essential and distinctive function is developing abilities to utilize knowledge derived from various sources as a basis for skillful performance to achieve specific goals."³⁹ This is a far cry from centering almost all attention on the "nursing arts," which comprise much of the instruction of poorer schools. Dr. Bridgman adds, "... many question the educational efficacy of stereotyped courses with limited content and primary emphasis on techniques, combined with practice in the various nursing services, the duration of which is measured by time rather than by learning experience."⁴⁰

The two-year master's degree program of social work educa-

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tion is divided into four areas—the social services, which includes knowledge and understanding of social legislation and the social agencies; human growth and behavior, again supplying knowledge and understanding; social work practice, which includes the professional methods used in carrying out social work tasks; and research. Of these, skills of practice are concentrated in social work practice, buttressed by the knowledge and understanding gained in the other areas of the curriculum. But the skills achieved are considered to be skills useful in a variety of situations, not in specific jobs in agencies. As Dr. Katherine A. Kendall puts it:

...social work educators have the responsibility for preparing professional personnel in such a way that they are equipped with knowledge, attitudes, and beginning skills which can be put to use in a wide variety of agencies, programs, and services. This is a more difficult task than the preparation of personnel for specific jobs in specific agencies. It requires that we educate rather than train; that, as educators, we think and teach in terms of well-rounded professional competence rather than of narrow, technical proficiency in a specific field; that we approach the incorporation of the growing edges of practice such as corrections, vocational rehabilitation, etc., as members of an established professional discipline rather than as opportunists ready to bend our educational programs to every vocational purpose.⁴¹

In general, then, the trend of the curriculum in the various professional fields is to move toward greater emphasis on knowledge, concepts, and principles, with proportionately less emphasis on detailed instruction in the skills of practice or on special techniques. Professional curricula are moving farther and farther from the skills that can be transmitted through apprenticeship alone, and field experience, as we shall see, has become, in so far as possible, an integrated part of the curricu-

lum, where practice is undertaken against a background of theory and knowledge on which practice can be constantly evaluated and improved.

Specialization

A third and final aspect of curricular content is specialization. A profession must determine whether its practice has such a variety of requirements that its education must vary according to the professional objective of the student. If sharply differing bodies of knowledge and skill are required, the professional school may be called upon to establish special curricula for each occupational objective. It will have to set up "specializations."

It must also make a decision on where the specialization should be established, whether within the years devoted to obtaining the first professional degree, or in study or field experience subsequent to that point.

The different professions reach contradictory conclusions on these questions. Some of them have little specialization prior to the first professional degree. Of the ten studied, these include architecture, law, medicine, clinical psychology, and veterinary medicine. In each of these professions, specialization normally comes after the first professional degree, even though there may be some greater emphasis on one part of the curriculum than on another during the course of obtaining the degree. Differentiations are possible through using different field experiences in clinical psychology, and specializations within clinical psychology may emerge. At the moment, however, the variations are small, and cannot be recognized as specializations. In the other fields, however, specializations are easy to recognize. They can hardly be avoided in engineering, which accredits the amazing

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number of twenty-one specializations. Even this extended list does not comprise all the engineering specializations, since the Engineers' Council for Professional Development reported in 1953 that it had received applications for approval of 15 additional specializations.⁴² Although the number of specializations in engineering seems staggeringly high, the variations are not as large as the number and titles would make it appear. Armsby points out:

The various engineering curriculums differ from one another chiefly in the specialized subjects studied during the last two years. In most institutions the freshman year is the same for all fields of engineering, and there are no radical differences in the freshman year of any of the accredited institutions. Generally a large part of the work in the sophomore year is common to all curriculums. The specialization, which begins in a limited way in the sophomore year, is intensified in the junior year and continues in the senior year.⁴³

Teacher education tends to specialize for elementary teachers and for the various fields of secondary school teachers. A few accredited schools of nursing offer specializations in undergraduate programs, but the number is declining. The American Association of Collegiate Schools of Business accredits only those schools which can provide three specializations. Its standard 4 requires:

As the foundation for training in business administration, instruction should be offered in the fields of economics, accounting, statistics, business law, finance, marketing, and management . . . Candidates for the undergraduate degree shall receive basic instruction in each of these fields. Opportunities beyond the basic courses shall be available in at least three of the above fields.⁴⁴

Social work through the Council on Social Work Education accredits the total two-year program of schools of social work,

and in addition did accredit special sequences in school social work, group work, medical social work, and psychiatric social work. It had taken over accrediting these specializations from the corresponding groups of practitioners. As the schools moved toward a more general conception of social work education, they worked toward developing the two-year master's degree curriculum into an integrated whole. Inevitably, they questioned whether specialized groups of courses designed to prepare students for segments of social work should be continued. Their questions were supported by the merger of seven separate groups of social work practitioners into a single professional organization, the National Association of Social Workers, reflecting again the conviction that social work is a single professional field whose contribution can be made in a number of different situations. Based on this new recognition of unity in practice as well as in education, the schools and the Council agreed to discontinue accrediting specialized sequences of courses, and accredit schools only on the basis of the total two-year program. The policy became effective in June, 1959.⁴⁵

ORGANIZATION

Curriculum is not only concerned with content, or the learning experiences which the school provides for students. It is also concerned with organization, or how the learning experiences are arranged, for both *sequence* and *relationships*. Here again, the variations from one profession to another, and even from one professional school to another within the same profession, prevent any detailed presentation. About all that is possible are some few generalizations, and a plea for further study that would make possible more definitive statements about the continuity, sequence, and integration of professional school curricula.

Sequence

In general, the customary sequence of professional school curricula begins with the basic sciences which underly its practice, proceeds from there to focus on those parts of the sciences which have particular applicability to practice, and moves on to the knowledge and skills more directly related to practice. Engineering, for example, emphasizes that "certain curricular areas are obviously basic to undergraduate engineering education."⁴⁴ Early in the curriculum appear the "basic sciences which make up the foundation of engineering curricula; . . . usually considered to include mathematics, physics, and chemistry."⁴⁵ These are followed by and built upon by the engineering sciences, which, in effect, serve as mediators between the basic sciences and the skills of practice. "An engineering science as defined here is a subject that involves largely the study of scientific principles as related to, and as related through, engineering problems and situations."⁴⁶ The engineering sciences are divided into six groups: mechanics of solids, fluid mechanics, thermodynamics, transfer and rate mechanisms, electrical theory, and nature and properties of materials. They are background courses, not focused on any specialization, but they translate the content of mathematics, physics, and chemistry into knowledge applicable to engineering. Engineering analysis, design, and engineering systems grow out of and depend upon understanding of the engineering sciences. These three major groupings within the scientific-technological part of the engineering curriculum comprise a sequence. As the *Report on Evaluation of Engineering Education* puts it:

The third major element in the definition of an engineering curriculum is that it must contain an integrated sequential study. By this is meant that mathematics and the basic sciences shall be used pro-

sufficiently in the courses in engineering science and that the latter, in turn, shall be used proficiently in engineering analysis, in the study of engineering systems, and in the preparation for creative design work."¹⁰

A number of professions have found this order of basic science, "professional" science, and application to practice, a useful one. Teacher education, in different language, proposes much the same order. It sees that "the academic fields . . . make a major contribution to two of the three aspects of the curriculum for the prospective teacher. First, they are basic to the general education. . . . Second, they are central in the experiences which provide competence in the fields of specialization."¹¹ Professional education follows, or may parallel, the "academic fields." The "academic fields" provide instruction in the basic sciences, such as psychology and sociology, and the professional education may then provide instruction in the "educational" sciences, such as educational psychology or educational sociology, where the science is directed toward the professional area. Application follows through student teaching and seminars.

Medicine, too, follows this order, much more rigidly than teacher education. Here the order is frequently unmodified, moving from the basic sciences of physics, chemistry, biology, and mathematics of the undergraduate college, through the "medical" sciences of anatomy, physiology, bio-chemistry, and bacteriology, among others. From the medical sciences, which mediate or translate the basic sciences into the medical fields, the student moves on into clinical instruction and ultimately into internship, where he learns the application of the medical sciences he mastered within the first two years of medical school. Again the order runs from basic science, to "professional" science, to application.

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Although this order is compelling in its logical movement from basic science through "professional" science to application, it has caused dissatisfaction. It postpones application and concrete experience to the end of the curriculum, and it may lose the interest of students who are asked to master principles without understanding their application. Under stimulus of funds from the Commonwealth Fund, 19 medical schools began in 1955-56 to review their curricula to strengthen and improve their programs. Part of their concern was with content, but part with breaking out of the rigidly logical order of the curriculum. As the Fund reported:

... These programs sought to make the student's education experience more effective in terms of a better understanding of the socio-psychobiological completeness of the human being. Among the newer aspects of these programs were the interrelatedness of the concepts and facts of the sciences on which modern medicine rests, *experience with living people early in the medical course*, continuity of responsible contact between the student and patient and study of the patient's social situation.⁵¹

The logic of knowledge is not always the logic of learning. Changes in the sequence of the professional curricula appear to be moving toward paralleling study of theory with study of application, much on the order of social work's "concurrent" field experience. Here students are provided with experience in a work situation under educationally talented supervision that parallels and interacts with classroom instruction in the theories and principles of social work. Summer employment in architecture sometimes serves the same purpose. Teacher education is finding that early observation of and participation in teaching in schools illuminates and sharpens the study of principles. From a "layer-cake" sequence, some schools are moving toward an

order in which study of principles and experiences in application proceed side by side.

One final comment on the subject of sequence is necessary. Each of the fields considered, with the exceptions of business administration, law, veterinary medicine, and most schools of engineering, has some sort of field experience as part of its curriculum. But there are wide variations in the time at which it is provided. Some engineering schools provide it through "co-op" plans in which students alternate class work with industrial employment. In medicine and architecture field experience comes after the degree is awarded and is outside the jurisdiction of the school. In teacher education, student teaching usually comes in the latter part of the third year or early in the fourth year. In clinical psychology, an internship occurs during the third year or fourth year of the four-year curriculum, and is preceded by several brief but intensive laboratory and practicum courses. Nursing and social work often parallel what the first calls "clinical" experience and the second "field" experience with other parts of the curriculum, although both arrange for blocks of time to be used for this purpose when the clinical or field facility is distant from the campus. In both, the parallel arrangement predominates.

Relationships

Sequence affects but does not control *relationships* among parts of the curriculum. The ultimate goal of the curriculum is to aid the student to master an integrated body of knowledge and skill in which the various parts merge in behavior appropriate to the profession and beneficial to society. To a considerable extent, the student himself must achieve his own integration, in light of his desires and needs. His likelihood of doing so, however, is enhanced if the curriculum is designed so that

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Although this order is compelling in its logical movement from basic science through "professional" science to application, it has caused dissatisfaction. It postpones application and concrete experience to the end of the curriculum, and it may lose the interest of students who are asked to master principles without understanding their application. Under stimulus of funds from the Commonwealth Fund, 19 medical schools began in 1955-56 to review their curricula to strengthen and improve their programs. Part of their concern was with content, but part with breaking out of the rigidly logical order of the curriculum. As the Fund reported:

. . . These programs sought to make the student's education experience more effective in terms of a better understanding of the socio-psychobiological completeness of the human being. Among the newer aspects of these programs were the interrelatedness of the concepts and facts of the sciences on which modern medicine rests, *experience with living people early in the medical course*, continuity of responsible contact between the student and patient and study of the patient's social situation.⁵¹

The logic of knowledge is not always the logic of learning. Changes in the sequence of the professional curricula appear to be moving toward paralleling study of theory with study of application, much on the order of social work's "concurrent" field experience. Here students are provided with experience in a work situation under educationally talented supervision that parallels and interacts with classroom instruction in the theories and principles of social work. Summer employment in architecture sometimes serves the same purpose. Teacher education is finding that early observation of and participation in teaching in schools illuminates and sharpens the study of principles. From a "layer-cake" sequence, some schools are moving toward an

order in which study of principles and experiences in application proceed side by side.

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integration is encouraged rather than inhibited. From the literature of professional education, it is not clear that the relationships of the various parts of the curriculum are often as carefully considered as content and sequence. Integration begins to appear at the point of field work rather than as a concern throughout the whole curriculum.

Consider, for example, the comment of Elliott Dunlap Smith:

In most engineering schools, also, general and professional courses have been taught so truly in parallel that they have never met . . . and there has been as little contact between them as if the general courses had been taught in college and the professional courses in graduate school.⁶²

Architectural education includes physics, but often the course is so poorly related to other subjects that it appears useless. Note the reaction of *The Architect at Mid-Century*:

Here, particularly, the design of courses primarily to please the ego of the instructor or to cater to the needs of students intending to major in the field seems to be at its worst. Unfortunately, the typical physicist appears to consider that anything less than nuclear reactions is beneath his consideration and should be supplied elsewhere when needed. In short, in the age of science, the scientist seems to feel little obligation to those who must apply his hard-won principles.⁶³

Problems of relationship occur not only between general courses and professional courses, as Dr. Smith suggests, and between courses in the basic sciences and professional courses, as *The Architect at Mid-Century* points out, but among the parts of professional instruction itself. Dietrick and Benson discovered that "Practically every medical school studied was making a conscious effort to integrate and correlate the teach-

proaches which they discovered—"correlation clinics" which clinical and basic medical science departments joined in conducting, joint design of courses by two departments, or appointing faculty members to two departments—was fully satisfactory. The search for integration continues.

EXPERIMENTATION

This chapter cannot end without recognition of the extraordinary amount of study and experimentation now focused on the curricula of professional schools. Almost every one of the ten professions we have been considering has participated in national efforts to restudy and revise the curricula of the schools. These efforts have been followed by changes in the curricula which are remaking the programs of professional education. Over thirty medical schools are modifying the content and organization of their curricula in substantial ways.¹³ Nursing is experimenting with practical nurse programs in vocational schools, two-year programs in junior colleges, three-year programs in hospitals, and four-year programs in colleges. Architecture, business administration, engineering, clinical psychology, social work, and teaching are all vigorously analyzing the curricula to determine what changes are needed to improve the quality of graduates. Perhaps we should permit law to summarize these trends for all the professions. In legal education, Harno found that:

There is today a substantial measure of activity and ferment in the law schools. Never before in the long history of legal education has there been so much self-criticism among law teachers as there is now. This state of mind has not permeated into all the schools, but it is widespread and it is genuine. Law teachers in substantial numbers are active in the sense of being willing to engage in educational experiments. Many of these experiments, no doubt, are ephemeral,

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but the happy fact is that they are being undertaken. Some, indeed, are significant and have already resulted in the introduction of courses and educational programs that are occupying permanent spots in the curricula of a number of schools.¹⁴

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CHAPTER 3

Methods of Instruction

Education is the acquisition of the art of the utilization of knowledge.

—Alfred North Whitehead

METHODS of instruction and subjects of the curriculum are hardly separate. Each affects the other. The nature of professional education limits and determines the methods which it employs. Some methods it uses would not be appropriate for other kinds of education, with different objectives and different foci. As we have seen, professional education attempts to produce persons who have professional competence, social understanding, professional personalities, zest for continued study, and competence in or appreciation of research. These objectives are reflected in the content of the professional curriculum, as it moves through the basic arts and sciences, through the "professional" sciences related more precisely to the functions of the profession, and on into the art of application, or as Whitehead puts it, "the art of utilization of knowledge." Some methods which are appropriate at the beginning of this progression may be inappropriate toward its end, where other methods may be preferable.

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No single method of instruction can be satisfactory in all situations or for all ends. An instructor chooses those which he finds to be most useful and effective in his hands to aid the student to achieve the competence for which the course is designed. The search for more effective methods parallels the search for more effective curricula in professional education. An unsuccessful course may be deficient either in subject matter or instruction. Useful material may be worthless if poorly taught. Useless material hardly benefits from superior teaching.

It may seem futile in light of these ideas to consider methods of instruction at all. Since the curriculum determines or at least limits the choice of method, and since every instructor must find those methods which are best suited to his abilities and his students, perhaps little can be gained from comparing methods of instruction used in the various professional fields. But a review of the professional fields shows that certain methods recur frequently enough to form a pattern. These we can consider with profit.

METHODS IN THE BASIC SCIENCES AND HUMANITIES, AND TOOL SUBJECTS

Professional education rests upon a base of concepts from the humanities, and the physical and social sciences, usually taught in the liberal arts or general education parts of the university curriculum. Logically, knowledge in these fields precedes and supports the acquisition of knowledge in the "professional" sciences. Often, however, students undertake advanced work in the basic fields concurrently with work in the "professional" sciences. Each contributes to the understanding of the other.

No matter how located, responsibility for instruction in the basic sciences and humanities usually falls outside of the juris-

diction of the professional school. Students or faculty in professional schools have little control over methods of instruction in these fields. The subject-matter of the basic sciences and humanities and faculty members teaching them define the methods used. These are usually the traditional methods of lecture and demonstration, with laboratory exercises, and more rarely, observation to translate the concepts into reality. Often, instruction places substantial emphasis on facts and concepts, with little effort to relate them to problems of interest to the professional student.

Large classes, the growing body of knowledge, and the inclination of instructors tend to make the lecture the dominant method of instruction in the basic sciences and humanities, with the exception of the "tool" subjects, such as written or spoken languages, statistics, and mathematics. In the "tool" subjects, instructors place more emphasis on the solution of problems, and judge the student on his ability to solve them successfully. Often the problems are distant from the student's interests, but they are not necessarily so.

The laboratory, particularly in physics and chemistry, supplements the lecture with opportunities for students to learn the procedures and skills by which these sciences have accumulated the data from which their generalizations are drawn. In the laboratory, the student manipulates materials and equipment to reach predetermined solutions of defined problems, and is judged on his accuracy and speed in doing so. At more advanced stages, he may investigate problems for which solutions have not yet been found, but he rarely does in introductory work.

To a considerable extent, therefore, the methods used in the basic courses focus on giving information and imply a relatively passive student, whose learning is tested by recitation and

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examination. Laboratory work in the sciences and exercises in the tool subjects often are based on problems supplied by text or manual whose solutions appear in the back of the book. At this stage, the student does little with definition of problems or with application of concepts. His task is largely acquisition of knowledge and skills. He has little chance to apply knowledge or skills to the solution of problems which are vital to him.

METHODS IN THE "PROFESSIONAL" SCIENCES

From the basic sciences and humanities, the student destined for a professional career moves on to study of "professional" sciences, which are built of concepts and ideas winnowed from the basic sciences and humanities. Those which have particular relevance to the profession are organized for more detailed examination and study. Social work, for example, draws ideas and concepts from psychiatry, psychology, biology, sociology, and anthropology for its group of courses, called a "sequence," in Human Growth and Behavior. Medicine draws from zoology for human anatomy and physiology. Engineering draws from physics and mathematics for hydraulics. Teacher education draws educational psychology from psychology, and educational sociology from sociology. Law uses elements of political science and sociology for courses in "Law and the Social Order." Architecture uses parts of physics and chemistry to support its study of materials for construction, structural theory, and structural design. In each field, the "professional" sciences look backward to the sciences from which the ideas and concepts have been derived, and look forward to their application within the context of the profession. The scope of concern with the subject-matter of each basic science is narrowed, but the "professional" science may include parts of several basic sciences, chosen in light of the special needs of the professional

practitioner. Students explore in more detail concepts from the basic sciences which may have seemed irrelevant when first studied in the introductory courses. Courses in the "professional" sciences are designed to aid the student obtain the equipment he needs to practice, in which he will use concepts to direct the use of skills. His study therefore deepens, adding understanding of concepts too complex for introductory work, and searching for the conditions under which application of these and other concepts has validity. Furthermore, when the "professional" science fuses concepts from several basic sciences, the student must gain understanding of the relationships among the various parts.

In spite of the fact that the purposes of the "professional" sciences vary considerably from the purposes of the basic sciences and humanities, methods of instruction do not change substantially. The lecture and the text predominate, although emphasis on laboratory and exercises increases. In medicine, for example, Deitrick and Benson found that "Although didactic methods of teaching [that is, lectures] have been steadily losing ground, many faculties still strongly support them."² And the instructor of "professional" sciences struggles to solve the problem of deepening understanding rather than merely repeating concepts learned earlier from the basic sciences and humanities. In engineering, for example, the Committee on Improvement of Teaching concluded that "in engineering education entirely too much time is spent on profitless, repetitive, and routine assignments."³

A number of efforts are being made to improve teaching of the "professional" sciences. Most of these introduce the student to responsibility, under supervision, for observation and elementary action in his field before he completes work in the "professional" sciences. Teacher education may incorporate

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at least observation of schools during the first year. Social work introduces the student to field experience during his first quarter of professional education. Medicine attempts to blur the line between the medical sciences and clinical instruction through "correlation clinics" in which clinical instructors discuss patients who suffer from ailments related to the medical sciences being studied. The medical school at Western Reserve assigns each first-year medical student responsibility for care of a recent mother and her family two weeks after he enters medical school. He follows the family throughout his four years.*

METHODS FOR MASTERY OF SKILLS

Although the professional curriculum is moving toward greater emphasis on knowledge and less upon the skills of practice, mastery of some skills required by the profession will continue to be an objective. No one who has watched civil engineering students, armed with transits, surveying college campuses year after year, or has seen architecture students hunched over drafting boards, or has observed medical students, scalpels in hand, in the dissecting room, can believe that instruction in skills will disappear from professional education.

Methods for teaching skills vary substantially. Teaching skills as ends in themselves, separated from contexts in which they will be used, appears to be declining. But often repetition is necessary for mastery of a skill, and acquisition of a skill has to precede use of it. When this situation occurs, special instruction in skills becomes necessary.

When it is done, instruction in skills often follows the classic formula of vocational education and Army manuals—explanation, demonstration, execution under supervision, execution without supervision, and, finally, testing of results. The formula

is applicable to manual or verbal skills, and to simple or complex operations.

Each profession has skills which are of special value in its practice. Architecture deals with three-dimensional material, and "ability in drawing is therefore a basic tool for studying and communicating architectural ideas and designs."¹⁵ Architectural students spend long hours at drafting boards learning to use this "basic tool." The methods commonly used are demonstration and practice in doing exercises to enhance skills.

Engineering follows much the same method as architecture in helping students achieve skills in drawing and model making. Again the methods are demonstration and practice.

Skills acquired in professional education are by no means all manual ones. The medical student, in his clinical years, must learn "case-taking" both on the in-patient wards and with ambulatory patients. He tries to master the "rudiments of meeting, interviewing, and of establishing a good rapport with patients and of examining them."¹⁶ These skills the student learns from "lectures, demonstrations, and by practical application by small groups of students, six perhaps, under the guidance of an instructor in the wards or out-patient department of a hospital."¹⁷ In teacher education, students sometimes learn skills in "reflecting" emotional problems of children through participation in socio-drama, and they learn techniques for teaching reading through observation, demonstration and practice in the "demonstration" or "laboratory" school of the university or in the cooperating school of a community.

Although legal education focuses an unusual amount of attention on aiding the law student to master skills, "the most vocal criticism of legal education is that it is not practical enough, or stated more broadly, that it does not adequately train the young lawyer in the skills of practice."¹⁸ To offset this

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criticism, law schools use "moot courts" in which students act as attorneys, jury, and judge to try imaginary cases, and legal-aid clinics, in which students serve as assistants to staff attorneys for indigent clients who come with a great variety of problems. In both of these, because of their complexity, the law school approaches the methods of application rather than the more restricted methods of mastering individual skills.

METHODS OF INSTRUCTION IN APPLICATION

By the term "application," I mean the process by which the practitioner draws upon knowledge and skill, filters them through the screen of his personality, and applies them in a situation calling for the services of his profession. Competence in application is one ultimate objective of professional education. To achieve such competence, the student must learn to use knowledge to select and guide action that is appropriate to the problem and its context. A physician who makes a diagnosis and undertakes treatment, an attorney who organizes and pleads a case, a teacher who conducts a class, a social worker who makes a "placement" of a child for adoption, or an architect who designs and supervises construction of a building, is combining art and science in the process of application.

Professional education has done more to define its methods of instruction in application than it has for instruction in the basic sciences and humanities and in the "professional" sciences. In apprenticeship, from which professional education emerged, the student gained mastery of skills through imitation of the master, and then used these skills to provide services. In academic education, the student acquires knowledge, with less emphasis on skills or application. Professional education combines elements of apprenticeship with elements of academic education. It helps the student to gain knowledge and skill, and then helps him to

focus both knowledge and skill on application. It uses a great variety of devices or methods to accomplish this end of instruction in application.

Professional education helps the student master the process of application by placing him in closely simulated or actual situations which require the service of the profession, and allowing him, under supervision, to take needed action. In many professions, but not all, instructors guide the student in his choice of concepts and devices to apply in the situations. He moves from situations where he takes simple, closely-supervised actions to situations requiring more complex solutions, and from ones in which he takes little responsibility to ones in which he assumes virtually total responsibility. Often supervisors or instructors review and analyze his actions with him so that the principles incorporated in the situation and the action can be isolated and considered. They usually evaluate the student's performance to make it possible for him to improve his effectiveness. Instruction in application therefore does much more than merely provide a student with "experience" in parts of the profession. Adequately planned and conducted, it aids the student to apply what he has learned, to test what he has learned, to learn more, to recognize gaps in his learning, and gradually to gain competence in his ability to practice within the standards of his profession. Study of the basic sciences and humanities and the professional sciences helps to make him a scholar of the profession; application helps him to obtain competence in practice of the profession.

Instruction in application is so important to professional education that it uses classroom and laboratory, hospital, clinic, and demonstration school on the campus, and office and agency beyond the campus, as means of instruction. The schools for

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different professions combine these varied means in differing ways and proportions, but all use some of them.

In Classroom and Laboratory

Problems:—In several of the professions, students begin to work with *problems* early in the curriculum. Architecture, for example, uses the "problem method" so constantly in teaching design that it "has come to over-shadow all other aspects of design training." * Under the problem method, the instructor gives the architectural student a set of facts about a proposed building, including information on its site, purpose, size, cost, and so on, from which he works out an architectural design which will efficiently solve the problem. "Each problem is an exercise in the application of certain definite facts, principles, and skills, in other words, the content which the problem is intended to illustrate." ¹⁰ In architectural design, problems may at first be fairly simple, but they grow in complexity until they may take several months to complete. As the problems grow in complexity, they merge over into what engineering education calls the "project method."

Project method:—Engineering looks upon the *project method* as "the most valuable of the methods that may be used to develop originality and resourcefulness." ¹¹ Through its use, the student works on "problems of more comprehensive scope than those of the usual type employed in introductory courses which involve only a single element or operation. Projects may range from simple situations which may be used to introduce the method in the lower years to those for more mature students which are of larger scale and more complex nature involving search for the principles involved. . . . The undergraduate thesis or senior seminar paper should represent the culmination of this method of instruction." ¹² Thus, use of the project method may

run all the way through the engineering curriculum. It constantly anticipates the way the student will work after he enters practice. Therefore, "a major purpose of the project method is to give the student a sample, even if a small one, of the way he will meet conditions after graduation."¹²

Case Method:—Architecture and engineering deal with structures. The professions more closely related to the social sciences use the *case method* for much the same purposes and reasons that underlie the project method in engineering and architecture.

The case method was first used in teaching law. Its originator was Christopher Columbus Langdell, who became dean of the Harvard Law School in 1870. Langdell published his first case-book, *A Selection of Cases on the Law of Contracts*, in 1871. In his Preface, Langdell explained what he was doing:

Law, considered as a science, consists of certain principles or doctrines. To have such mastery of these as to be able to apply them with constant facility and certainty to the ever-tangled skein of human affairs, is what constitutes a true lawyer; and hence to acquire that mastery should be the business of every earnest student of law. Each of these doctrines has arrived at its present state by slow degrees; in other words, it is a growth, extending in many cases through centuries. This growth is to be traced in the main through a series of cases; and much the shortest and best, if not the only way of mastering the doctrine effectually is by studying the cases in which it is embodied.¹³

Langdell wished to have law students master the principles of law. Mastery, he defines, is judged by ability to apply principles "with constant facility and certainty" to human affairs. He concludes that perhaps the only way in which this dual aim can be accomplished is through the study of selected cases.

By using cases, instruction departs from the method of the

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lecture and depends upon group discussion, guided and illumined by the instructor. The essence of case teaching "lies in the provision to all students in a class of a series of concrete, problem-raising situations—common material for group discussion, so selected and arranged that related problems can be considered together in an effort to develop principles in the course of class discussion, and to provide some exercise, in class, in the testing and application of the principles."¹³ The elements of case teaching are a group of selected and organized cases, illustrating principles; group discussion under guidance of the instructor, to elicit the principles from the case material; and effort to test and apply the principles. In law, the method of case teaching is designed both to define principles through induction from specific cases, and to consider ways of applying the principles to other situations.

Langdell limited his casebooks to a selection of leading or influential cases, arranged historically in accordance with the concepts and doctrines they developed and illustrated. He selected the cases largely from appellate courts, and presented them starkly, without editing and without comment. Since his day, casebooks multiplied as the method came to dominate legal teaching. The expansion of law has forced editors to reduce the length of cases, but they frequently add materials from other sources. These new materials include "text discussions, excerpts from law review articles, reproductions of statutes, legal forms, and various other materials."¹⁴

Case books vary in the material they include, and case teaching can vary even more substantially. Llewellyn points out that cases can be taught from two diametrically opposed points-of-view: from the "rear," with emphasis on "the decision as something done and complete," or from the "front," with emphasis

on the case as a problem "for solution, as a problem not with its answer at hand but as one to which possible answers are to be worked out in class." He strongly urges the approach from the "front."¹⁷

In a study of the use of the case method, Edmund M. Morgan found three principal varieties of instructors. The first type of instructor uses the case merely to impart information, which could be done more rapidly and effectively through text and lecture. The second requires a careful statement of the facts, so that students can learn to discard the non-essentials, but the instructor goes little further in analysis. In Morgan's judgment, the third type of instructor uses the case method at its best.

The instructor varies the manner of handling the cases. He may begin with a statement of a case by the student or by putting a hypothetical state of facts varying only in immaterial details from the case in the text. When discussion of the problem presented by the assigned case has been exhausted, he suggests other states of facts . . . and requires the student to form a judgment as to whether the variance in the facts is of legal significance, and whether the reasoning in the assigned case would require the same or a different result. If the reasoning would require or justify the same result, he asks whether the result appeals to the student's sense of fairness. . . . He seeks to have the student consider whether the generalization stated as the basis of decision in the principal case should be treated as universally applicable or should be modified, and to exercise his own judgment concerning the extent to which the case should be used as a precedent.¹⁸

Advantages of the case method are many. It turned the law schools from major dependence on lectures, in which the active participation of students might be limited to taking notes, to emphasis on discussion and analysis by students. It allowed instruction to derive principles rather than to announce them.

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The concrete situation stimulates attention and gives both the individual student and the class at large something to get teeth into as well as something which makes discussion meaningful and which makes it relatively easy to remember. Broad words and ideas are sharpened against hard clean situations. The body of common material studied in advance by the entire class and presented during the discussion for detailed study permits valuable training in analysis and diagnosis, and in the rigorous thinking through of the relation of any proposed "line" of solution to its application.¹⁸

Small wonder, then, that "the case method grew to become the basic method of instruction in every law school in the country."¹⁹

Legal educators have become more and more aware, however, that the case method cannot, by itself, supply all legal instruction, even though they recognize its effectiveness and expect to continue its use. That use, in the future, will probably be more discriminating than it has been since Langdell. It is an inappropriate method for giving information. Information can be better obtained through lecture and text. By its concentration on court trials and decisions, the case method may fail to aid understanding of the relationships within the law itself and between law and other fields. It may fail in giving the student professional skills other than those of analyzing cases. In summary, it may be too sharply focused to provide full understanding of the law itself and its relationships, and it may ignore essential professional skills.

The case method reached its apogee in legal education. In no other professional field has it dominated instruction as it once did there. But other fields have found adaptations of the method useful in their educational programs.

Use of the case method in other fields exhibits important differences. In the first place, other fields have no body of cases

ready at hand for selection and presentation. Legal education can use court records with their verbatim transcripts of proceedings and their written judicial decisions. Other fields must collect and prepare their cases, sometimes from records, as in social work, but more often from observations, interviews, and file materials. Costs of preparation are therefore much greater in fields other than law.

In the second place, cases used in other fields normally avoid including the solution. Thus they preclude the possibility of working backward from decision to reasoning, and make it essential to consider alternative solutions to the problems set forth. To do so, the student applies principles and concepts obtained from other study, and reaches solutions by deciding on actions to take. He must determine which principles and concepts will be useful in aiding a decision, not what principles and concepts have been used in making a decision.

In business administration, as in law, the case method was originated and developed at Harvard. It is used in a number of other schools. Harvard was searching for a means of helping students learn the processes of applying their knowledge to the solution of business problems, and to do this in the classroom under the guidance of instructors. It found the solution in the case method.

Under the case system, the student is given real business problems, secured from actual business organizations, for *his* analysis and discussion, for *his* solution and decision. The cases are representative of American business. Thus they deal with the problems of companies new and growing, old and mature, large and small. The students . . . like business executives must find answers to questions like these:

What, if anything, should be done? Why?
How would you set it down?

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What facts would you like before you decide what to do?

What facts can you get by the time you have to decide at a cost that it is worthwhile?

What risks are involved in your decision and what alternative action can be taken if the existing conditions change?

Each case is discussed by the class in terms of questions such as these. The instructor may guide discussion, but he does not give set or final answers.²¹

Other fields use cases also. Social work has depended heavily on the case method of instruction. It has developed the practice of using prepared cases which illustrate good practice, and, also, cases which students bring from their field experience for classroom discussion and analysis. Methods courses are thereby illumined with concrete experiences of skilled workers and students. The wide variety of settings in which social work is practiced and in which students undertake field work assures a rich source of case material. In the field agency, the student faces actual situations of need and service and learns through taking part in the helping process. In the classroom, the case portrays an actual situation, which is presented by a record or report suitably edited and disguised for teaching purposes. The student has the opportunity to analyze the case and to draw from it principles of application that may be of use in other situations when he begins practice. Students in schools which follow the block plan of separating periods of classroom and field experience often develop records for use in the classroom after a period of field work has been completed. In at least one school where the block plan is highly developed, the students' own records are combined as a case book for use in the final semester.²²

The Council on Social Work Education has prepared a number of teaching records for classroom use. It and other agencies have located and prepared records for teaching and have made

them available to the social work schools as supplements to their own libraries of case records.

Unlike law and business administration, social work has not limited its use of cases to the written word. It has used tape recordings and films to present teaching cases, and has experimented with socio-drama.

Teaching by cases requires careful planning. The faculty faces decisions on the type of record to use, and the number of cases to use. It must judge how to use them—whether inductively to present facts from which principles can be drawn, or deductively to illustrate the application of principles. The cases chosen must be selected with care so that they will reflect the major principles and concepts which the student is expected to understand and to adopt in his later practice.

Of the ten professions, law, business administration, and social work use the case method for a considerable part of classroom instruction. Other professions use other ways of focusing discussion and analysis on a "case." Teaching uses role-playing as a means of presenting and studying teaching methods. In the health professions, a student may be assigned continuing responsibility for care of a patient. But this use of the case method takes us beyond the classroom to clinic, hospital or agency. It will be discussed later.

Research Studies:—Research studies are a less widely-used method of instruction in application. The future practitioner will need to base decisions in his practice on his ability to conduct or interpret research. In a number of professional fields, therefore, his ability to assemble and interpret relevant data within the methodology of his field becomes an important part of his learning how to practice.

Clinical psychology, which points toward the traditional research degree of the Doctor of Philosophy, puts a heavy em-

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phasis on research competence. Clinical psychology, as we have seen, is not located in a separate professional school, but operates as an academic department within the graduate school. It is unique, therefore, among the fields we have studied. It combines the emphasis of graduate study on research and independent investigation with instruction in clinical skills and techniques and with supervised clinical practice with human beings.²³

The student in clinical psychology does not arrive at the dissertation without considerable preparation along the way. He will have worked his way through courses in experimental psychology, advanced statistics, research design, and will have become familiar with quantitative methods in psychology and psycho-therapy. Research attitudes and problems permeate the diagnostic courses and instruction in therapy as well as the courses in general psychology and psycho-dynamics. If successful he will have acquired research skills in:

relevant analysis—the ability to separate preconceptions and inferences from observation

careful definition of concepts—as a check on “intuitive” ideas
statistical analysis of data, and effective presentation of findings
formulation of research problems and research design.²⁴

With equipment such as this, the student is encouraged to select a dissertation topic during his second year of graduate work, and to begin work on it during the third year in which he takes his internship. He spends much of the fourth year in work on the dissertation. Psychology departments, like other graduate departments, expect the dissertation to be a contribution to knowledge, based on original research. It represents an application of the student's learning to a research task—a foretaste of his future responsibilities as a practitioner.

No other field makes such strenuous research demands on

the student. But some of the others require research studies. Social work customarily expects a thesis or participation in a group research project, and provides a research "sequence" of courses for which "on the average between 15 and 20 percent of academic work in the Master's curriculum is given over to the research component, i.e., courses and the thesis or project."¹¹ In engineering, the Committee on Improvement of Teaching recommends that "the undergraduate thesis or senior seminar paper should represent the culmination"¹² of instruction by the project method. Although other fields all require, in varying amounts, term papers or reports of projects, few use the large research project as a means of integrating the student's knowledge.

One unique method should be described. A number of law schools assign students who rank high in class to edit the law review as a means of consolidating their knowledge and skill on legal scholarship. Over seventy law reviews "with law-school connections are... being published in the United States."¹³ Llewellyn has a high regard for the educational use of the law review. He says:

... one of the most satisfactory educational tools in existence is the machinery of the student-run Law Reviews under which the better men are drained off case-class work into jobs of research, synthesis, criticism, and expression, and are given training which surpasses in adequacy that accomplished by their faculty in the class room. The student-run Law Review is a unique American achievement...—the only known group of first-rate professional periodicals responsibly edited and partly written by *undergraduates* in the discipline.¹⁴

He deplores the fact that only a few students have the opportunity to work on the reviews.

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In the Teaching Clinic

I am using the term "teaching clinic" as a broad category which includes those methods and facilities on the campus in which the student comes into contact with practice under the supervision of instructors. It is not limited to facilities which are normally called "clinics," but includes the in-patient wards of hospitals as well as the out-patient clinics, and the demonstration or laboratory school of teacher education. Architecture, business administration, engineering, and social work rarely have "teaching clinics," but the other professions depend heavily upon them. They have common characteristics, although they vary in many details. Some of the common characteristics are:

1. Teaching clinics provide professional services to a clientele outside the school.
2. The services are expected to meet professional standards.
3. The student participates in supplying these services.
4. The services or the standards which control their quality are administered by the school or the university of which it is a part.
5. The student's participation is organized for learning, as well as for providing service.
6. Instruction is provided, either through teachers or through supervisors.
7. Seminars or discussions on experiences in the teaching clinic are used to identify principles and procedures.
8. The student is given increasing responsibility for service, moving toward the status of beginning practitioner.
9. The clinic is operated by the university, or it arranges for its use through contract or agreement.

Within these characteristics, the clinic is considered an essential part of the educational program of the professional

school. It is invariably used prior to the award of the degree. Its purpose, in part, is to teach skills. But it also provides opportunities to the student to combine skills and knowledge into the process of application through which he solves problems similar to those which he will face as a practitioner. His instructors guide the process, correcting errors and helping him to gain understanding of which knowledge is relevant and which skills are effective. Through the clinic, the student begins to combine theory and practice, using each to strengthen his growing mastery of the other.

Both *medicine* and *veterinary medicine* devote most of the second two years of the curriculum to clinical study. During these years, the method of education changes sharply from the lecture and laboratory exercise on the sciences underlying practice of the profession to observation and participation in practice of it. Medical educators are convinced that only in this way can knowledge and skill be combined in the art of application, as the student focuses his attention on "cases," living beings who need assistance.

The Council on Medical Education and Hospitals recently reemphasized the need of medical education for the methods of the clinical years. It introduced the medical education number of the Journal of the American Medical Association by recalling the words of the Commission on Medical Education which made its report in 1932.

The commission also called attention to the fact that "knowledge of the chemical, physical and biological phenomena of disease, a grasp of the social and economic factors which are influencing the methods of dealing with sickness, and wide familiarity with the literature will not produce a real physician," in themselves. Such knowledge simply furnishes the physician's tools, and necessitates, in addition, the personal, supervised experience that enables the

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student and physician to gather and evaluate evidence, learn to discriminate between valuable and unessential, and weigh subtle implications of organic and functional variations; to reach conclusions that may involve varied and seemingly unrelated factors; and to understand in their true meaning the human and emotional problems associated with ill health.²⁸

The clinical years are designed to help the student learn to put his "tools" to work.

The word "clinical" derives from the Greek, meaning "of the bed," and it implies a unique part of clinical teaching in medicine. Teaching in the clinic not only involves the teacher and the student; it is focused on the patient, and is, in part at least, conducted in his presence. It is similar to the "case method" in being directed toward a particular occurrence or set of facts or situation. Instead of cases reflected in words or perhaps pictures, clinical instruction uses the patient or the client for its "case."

In medicine, clinical training usually begins with the "case-taking course." Through lectures, demonstration, and finally actual practice, small groups of students, often about six, learn with an instructor how to meet, interview, examine, and establish rapport with patients, either in the wards or in the outpatient department. A student obtains the history of the patient's illness, examines him, makes such laboratory tests as are indicated and arrives at a diagnosis. His diagnosis is discussed later by the group of students and the instructor in an informal seminar, away from the bedside. During this early period, the student has no responsibility for treatment.

Some medical schools proceed from this introductory work to the clinical clerkship. Here the student becomes an assistant in caring for the patient. He is a member of the medical team, and has responsibility not only for the initial history and the

physical and laboratory examinations, but for visiting his patients frequently and obtaining facts on their progress. These facts are all made available to the medical team when it visits the patients. The team then discusses diagnosis and treatment away from the bedside. The clerk brings to these discussions all he has learned from the patients, the laboratory, and the library.

A clerk moves from one department to another at set periods. In medicine and surgery, the period covers two or three months. In specialties like pediatrics and psychiatry, it may be only one month.

Direct responsibility, under supervision, for care of a patient is supplemented, in some schools, by another method—the clinicopathological conference. Here the student is not at the bedside, but one step removed. He is given a case-history of a patient who has died, and on whom an autopsy has been performed. The student has no previous knowledge of the patient, and does not know the result of the autopsy. On the basis of the record, he makes a diagnosis, and defends it in the conference. The pathologist then discloses the results of the autopsy. Student errors in diagnosis quickly become apparent.¹⁰

Clerkships are an essential part of medical education. But they are not without their difficulties. Deitrick and Berson discovered that rotation of the student through several wards on one service was sometimes so rapid that the student rarely could follow the patients to whom he had been assigned. They found that in large medical centers, strong specialty groups pushed for the addition of didactic lectures and conferences to the detriment of bedside teaching. But the greatest weakness lay in medical schools which depended on affiliated hospitals over which the schools can exercise little or no control. Too often, these hospitals use the students as interns, giving them respon-

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sibility for service to patients rather than providing them with graduated learning experiences within their competence."¹

In summary, for the two clinical years, the medical student works almost entirely with patients under supervision. Lectures are reduced to one or two a day. He learns some of the art of application of "medicine, surgery, pediatrics, obstetrics, public health, and the various medical and surgical specialities. During this time he learns to take case histories, perform examinations, and recognize the various manifestations of disease. He is required to become familiar with the course of all important diseases, their complications, and sequelae and to observe and become familiar with their treatment."²

Clinical teaching in veterinary medicine, as in human medicine, is largely confined to the last two years of the four-year course. Much of the third year, however, is limited to observation, and instruction in the "professional" sciences through lectures and laboratories continues. During the fourth year, at several of the veterinary medical schools, the student spends almost all his time in the clinics, diagnosing and treating patients, under the supervision of an instructor. At the end of the year, he will have had opportunity to have obtained clinical experience with large and small animals in medicine, obstetrics, surgery, pathology, and bacteriology.

Although veterinary educators recognize that the clinical years are essential ones, they are not wholly satisfied with the use some schools make of them. Dean William A. Hagan of Cornell University is convinced that veterinary medical schools have not improved their clinical teaching. He believes that too many schools have the students "assist in routine procedures" with "little challenge for them to study the cases, bringing to bear upon them full application of the basic sciences." Too often, he believes, faculty members make the "diagnoses and

decisions" with the students "passively looking on."¹³ The Council on Education of the American Veterinary Medical Association finds that a number of the schools manifest their "greatest weakness" in clinical instruction, because "sufficient clinical material is not available."¹⁴ In fact, most of the schools which are on probation have been placed there because of insufficient clinical material to support effective teaching.

Nursing schools, like medicine, use the university-owned hospital for clinical instruction, when one is available. But nursing education has an historical difficulty in its clinical teaching. Nearly 86 per cent of all students in nursing are enrolled in three-year courses in hospitals leading to a diploma and the right to licensing as a registered nurse through a state examination.¹⁵ Traditionally, instruction of the hospital school student has been largely service under supervision, rather than clinical instruction. When collegiate programs were first established, they combined two years of college with three years of hospital school training. At the end of the five years, the college awarded a bachelor's degree, but it exercised little or no supervision over instruction in the three years of hospital school. In effect, it accredited the hospital program without change.

As the four-year bachelor's program began developing in colleges, the confusion between clinical instruction and hospital service continued. Dr. Margaret Bridgman found that "Conditions in collegiate schools of nursing now vary widely. In some, clinical 'experience' is still primarily a work rather than a learning situation and only administrative supervision is provided. Systematic instruction is almost wholly confined to classes."¹⁶ Such an emphasis on service inhibits nursing from using clinical instruction with the same care and effectiveness that medicine and veterinary medicine have achieved. Fortu-

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nately, nursing schools are moving toward plans for more significant clinical instruction, in which the education of the student becomes the dominant goal. Dr. Bridgman comments:

The process of curriculum improvement has been going on for a long time in leading schools of nursing and, with emergence of actual or possible opportunities for free experimentation, some significant plans are being tried and others are under consideration. These include ideas of reorganization of clinical instruction, such as instructing students first in maternal and child care before introducing them to medical and surgical nursing in adult wards where the novice often encounters the most complex conditions, difficult procedures, and potentially traumatic experiences; or of teaching them first the care of ambulatory patients, then that of patients requiring partial rest in bed, and finally that of the acutely ill; or first developing their competence in performing the simplest nursing tasks such as those of an aide on the nursing team, then the functions of each member, always in the team relationship to others, and finally those of a team leader having professional responsibility for the care of a group of patients, directly and through shared or delegated activities. In all these plans the emphasis is upon the development of the student's knowledge, understanding, skill, and judgment through instruction and guidance in planned applications of theory.¹⁴

In schools such as these, clinical teaching is emerging from the limitations of the hospital school and is becoming an appropriate part of the collegiate program.

Teacher education, in some universities, uses a "laboratory school" as its on-campus clinic. Because of its proximity and control, it can be very useful for observation and study, particularly for short periods. But faculties who administer teacher education have concluded that these virtues are also faults, in that the campus laboratory school is greatly unlike the situa-

tions which the student will face upon entering the profession. As a result the use of campus laboratory schools for student teaching is declining. In its place, teacher education uses schools of various communities, sometimes at considerable distance from the campus. Because of this fact, we shall look at the field experiences of teacher education in the next section.

Psychology, like teacher education, sometimes uses a campus clinic, operated by the department, to provide the student with initial competences he will need when he undertakes field work. In the campus clinic he develops skills in the use of basic tools and techniques, such as the administration and scoring of tests, interviewing, and the role of the participant-observer.¹¹ The clinic is sometimes used for the clerkship and, less frequently, for the internship. These also will be described in the next section.

Legal-aid clinics in law schools are a final type. These are operated either directly by the law school or by it in cooperation with an established legal-aid office. They provide direct service to clients, but are staffed by law students who are supervised either by a practitioner or by an instructor. Clients come voluntarily to the clinic, since its services are free or inexpensive, though some clients may be referred to the clinic from social welfare agencies. From reports of the operation of the clinics, it appears that they have difficulty in providing a broad enough variety of cases and in being available to enough students. But "The values of the clinic as a teaching device have been demonstrated clearly and convincingly over the last thirty years."¹²

Beyond the Campus

Most of the professions we have studied include a period of what is variously called "internship," "field experience," "prac-

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ticum," or "student teaching," within the curriculum prior to the award of the degree, or prior to licensing for independent practice. Engineering, business administration, law, and veterinary medicine do not. Nursing may supply its clinical training in the university hospital, even though it often uses other hospitals. In architecture and in medicine the period of internship occurs after the degree has been awarded, and although the Doctor of Medicine may take his internship in the university hospital, he often finds another hospital in which to do so. Teacher education may establish student teaching within the campus laboratory school, but more and more frequently it uses schools not under its control. In teacher education, social work, and psychology, students conclude the practicum prior to award of the degree, and the practicum is therefore established under the supervision of the professional school. At one time, medical schools withheld the degree until the internship was completed, but this practice has been discontinued, even though "all medical school graduates today serve internships prior to entering practice or proceeding with graduate education through residency or fellowship training."⁴⁰

Preceptorship:—Two of these professions use a form of practicum called a "preceptorship" in medicine. In a preceptorship the student works as an aide to a practitioner of the profession to observe and assist in his practice, learning the mechanics of operating an office and the simpler procedures. Ideally, the student deals with increasingly difficult problems in an increasingly responsible manner, discussing the problems and their solutions with the preceptor, and establishing an intimate, personal relationship with him. A preceptorship introduces the student to the habits and requirements of the profession, in a situation where opportunities for him to learn are considered more important than service he can render, although service is

maintained at the level of quality which the practitioner applies to his own operations.

Psychology calls the period a "clerkship," and places it before graduation but during the school year, as part of the curriculum. Medicine places the "preceptorship" in the summers between school years prior to award of the degree. Both engineering and business encourage summer employment, which conforms somewhat to a preceptorship, except for the fact that the school does little to organize the time into a learning experience and does not make it a requirement.

In medicine, the preceptorship was the earliest form of medical education.¹² It was largely abandoned when medical education first moved into the university, but in recent years its use has expanded. Some 24, or approximately one-third, of the medical schools offer preceptorships in the summers between their third and fourth years. On the average the program lasts six weeks. It allows the medical student "to observe closely medical practice as it is carried out" by working in the office of a practicing physician.¹³

Medical educators have serious doubts about the usefulness of the preceptorship, in spite of its increased use. Although it gives students opportunities to learn office procedures, handling of private patients, and the elements of private practice, students are not greatly impressed by what they gain from the experience. Deitrick and Berson summarize their own reactions by saying:

The weaknesses of the preceptorship system are numerous. It confuses experience with true education; the time factor for study of patients is obviously disregarded, and the student may be a passive onlooker or be given responsibility for which he is not qualified. The methods of selecting preceptors are extremely weak since they do not select physicians primarily for teaching ability.... The pre-

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ceptorships are unsound at the level of instruction of the undergraduate medical student. It is doubtful whether they can be designed to meet requirements of true university educational standards.⁴³

Psychology uses the term "clerkship" to describe its assignment of second-year students for one or a few days a week for three months to work in an agency. Although the clerkship may be served in the university clinic, it usually is served in an agency outside the university. Since the clerkship is limited to a brief time during each week, the agency must be fairly close to the campus.

The clerkship is intended to give the student some familiarity with as many different problems as possible, skill to a modest degree in a number of clinical procedures, and acquaintance with ways in which clinical psychologists collaborate with other professional people. The student does not take responsibility for decisions regarding treatment or care of clients. His work is not used by the agency unless it has been done under close and competent supervision. The clerkship is largely an introduction to practice, through observation of and some small participation in the work of an agency. It provides a transition from classroom to internship.⁴⁴

Internship:—The most elaborate effort in professional education to help the student obtain competence in application is the internship. Not all professions have established internships, but most of those in which the student upon graduation may enter fairly isolated practice are convinced that an internship is a necessary part of the transition from student to practitioner. Although students may enter isolated practice in both law and veterinary medicine, neither has internships. Both are considering the need for establishing them. In law, Harno reports that the schools have not yet been able to successfully "bridge the

gap" between law schools and practice. He sees the need for greater effort:

From what has already been done successfully by the schools, it seems clear that they can go yet further in the inculcation of practical skills. It is not unlikely that they will be able to go all the way in bridging the gap between law study and practice, but failing that, then they should frankly acknowledge that some other agency or agencies must step in to finish the task. In that event, clinical training through office apprenticeships or internships in connection with legal aid programs might be required after graduation from law school and before admission to the bar.⁴⁵

In veterinary medicine, the lack of internships results from the difficulty of finding hospitals in which they could be established rather than from a belief that they are not needed. As Dean Hagan explains it:

In veterinary medicine there is little opportunity for internship training such as is part of medical training. This is because there are very few veterinary hospitals with staffs large enough to offer adequate internships. Many students, however, work immediately after graduation for a year or two with established practitioners before they attempt to set up their own practices. Sometimes this arrangement has been called an internship, but actually it is a preceptorship.⁴⁶

Business administration and engineering do not require internships since they are normally practiced in organizations and can depend upon in-service training for developing competence in application. Engineering has proposed its "scientifically-oriented curriculum" on the expectation that employers will teach engineering graduates how to apply their scientific knowledge. A group of industrialists, called together to consider the curriculum proposals endorsed them heartily, saying that "They

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were unwilling to sacrifice courses in engineering sciences to provide time for the study of technology or administration at the prebaccalaureate level, since they believe that these can be obtained under company sponsorship when needed."** In other words, they agreed to provide what amounts to an informal internship, prior to expecting the newly-employed graduate to be fully productive.

Nursing does not require an internship, apparently believing that its heavy concentration on clinical instruction fills the need.

Architecture, medicine, psychology, social work, and teacher education,* all require internships in various forms, of various lengths, and at various points.

In general, an internship is a work-experience of substantial length in an agency established to provide a clientele with the services of a profession. Students enter internships either late in the curriculum or after they have completed their academic work, with the one exception of social work, where the field experience begins shortly after entering a social work school. Characteristics of the internship are similar to those of the teaching clinic, with significant differences.

1. Internship agencies provide professional services.
2. The services meet professional standards for high quality.
3. The use of the agency for internships is usually approved either by the school or the professional association.
4. The intern participates in supplying the services.
5. The intern's experience is organized for learning, but he is expected to supply services commensurate with his competence.
6. Instruction is provided, largely through supervisors.

* Only medicine and psychology use the term "internship" to designate the kind of training described in the following pages. Teacher education uses the term to designate a period of postgraduate experience, not the period of "student teaching."

7. Seminars and discussions may be held to identify principles and assess procedures.
8. The intern accepts increasingly heavy responsibility for judgment and action, with decreasing supervision.
9. The intern may be paid for his services, although the payment, where made, is often nominal.

Characteristics of the internship are developed out of criteria which define the quality of the experience for the intern. For the internship continues a learning process which commenced with the student's entrance into the professional school. Within the internship, he is concerned with transmuting what he has learned into professional competence with which he can solve problems which are presented. His task is to be able to do this within the context of his profession, with which he becomes increasingly identified. An effective internship can aid this essential process; a poor internship can delay it.

To be of high quality, an internship must meet the following criteria:

1. *It challenges the capacity of the intern.* Nothing will seem more futile to the intern than a series of routine assignments which could be better executed by a clerical employee. An intern is filled with desire to become a professional, and his desire must be met by experiences which are pertinent to his professional growth. To do so, his assignments have significance either in themselves or as part of a larger activity whose goals the intern understands. Assignments of increasing difficulty help the intern grow in competence to resolve problems. He receives a variety of experiences, since he can gain little from repetition of similar situations once they have been mastered.

2. *It does not exceed the capacity of the intern.* Although the internship must challenge the intern, it must not rush him

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into situations for which he is not prepared. Charlotte Towle has pointed out that "The underlying principle of the entire educational process is to help the student keep his ego intact so that there will be a minimum of personality disorganization, so that reorganization and reintegration may occur gradually and naturally." ** To accomplish this, experiences in the internship are graded according to the student's growth in competence. Such planning is important not only for the intern, but for the work of the agency. It cannot afford the inadequate performance of an intern who is asked to do tasks which are beyond his capacity.

3. *It actively involves the intern.* An intern is expected to learn by action, by doing. Only as he assumes responsibility for providing the services of the profession, can he turn his knowledge and skills to use. If he only observes what someone else does, he himself can hardly learn how to do what is needed. Within the limits of safety to the client, he assumes the weight of responsibility for the action, and recognizes the personal consequences of different courses of action. He faces the choices and consequences in his internship as he will later in his practice.

4. *It provides competent supervision.* An intern, although possibly competent in knowledge and skills, is not yet competent in the application of them to problems with which the profession deals. He is not allowed, for his sake or the sake of the client, to "sink-or-swim." He is provided with help and guidance. A sympathetic and competent supervisor gives him help when needed and reassurance when required. Gradually, the supervisor aids him to grow from dependence to independence, achieving the satisfaction of working to the outer limits of his competence. But this cannot be achieved immediately, and it

can rarely be achieved without help. Selection of the supervisor is one of the crucial decisions of effective internship.

As we have seen, one of the objectives of professional education is the creation of a professional personality. In accomplishing this end, the relationship between supervisor and intern is highly important. To the intern, the supervisor is the representative of the profession with whom he initially identifies. He will tend to take on or perhaps react sharply against the values, the habits, even the mannerisms, of his supervisor. An emotional identification with the supervisor may become an identification with the profession, which will supply the images which guide the intern in his future professional actions. At best, the relationship of the supervisor to the intern "affirms growth through strengthening the ego-superego integration." The results of this sort of relationship, according to Charlotte Towle, are that:

Such a relationship eases the anxiety and tension implicit in learning to become a helping agent and lowers the need for defenses. As the student is enabled to contain anxiety or to deal with it in ways which do not complicate learning, his emotions become purposively engaged. He thus becomes increasingly perceptive, selective, self-aware, self-regulative, objective in his relationships, and realistic in his goal striving. The relationships with mentors thus serve as one means to widen the student's integrative capacity, so that it may equal and exceed the task. As this occurs, he gains increased confidence through competent performance and has some margin for creative effort.⁴²

5. It helps the intern to analyze and evaluate his experience. It is not enough for the internship to provide the intern with experiences. An undigested, unanalyzed series of experiences, no matter how well graded for difficulty, cannot by themselves make certain that the intern understands what he is doing and

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profits fully from it. He must have help to look at his own experience critically and analytically, testing it against theory and against the experience of others, drawing from it principles for guidance in similar situations, and finding in it definitions of his strengths and weaknesses, so that he can build upon the first and reduce the second. To this end, the internship includes discussions with supervisors, seminars with other interns, and self-conscious thinking about experiences.¹⁴

If the internship is built according to these criteria, it can hope for success in aiding students to become practitioners. Let us now look at the internship programs of the various professions.

Two of the five professions which require some form of internship—medicine and architecture—place the internship after award of the degree. To a considerable extent, therefore, the internship is the responsibility of an agency in which the profession is practiced rather than the responsibility of the professional school. In the other three professions—psychology, social work, and teaching—the internship is placed prior to award of the degree, and the responsibility of the school for the internship is greater. All five of the professions consider the internship an essential part of the educational program, and all are concerned about the educational standards which the internships are expected to meet.

The internship in *medicine* is considered “a period of hospital service, training and education, usually of one year’s duration, which follows graduation from medical school.”¹⁵ Although about half of the states will permit a physician to be licensed immediately after graduation from a medical school, almost all graduates who plan to practice take one or more years of internship. The internship is therefore considered the fifth year of medical education, although no medical school

now requires the internship as a prerequisite for the degree. Hospitals offering internships are approved by the Council on Medical Education and Hospitals of the American Medical Association.

According to the Council:

The purpose of the internship is to supplement the undergraduate medical course by a well-rounded experience of closely supervised clinical practice in diagnosis and therapy. There should be a progressive increase in the intern's responsibilities.

Internships designed without a well supervised educational program, or arranged merely to provide hospitals with resident personnel to assist in the clinical work of the hospital, cannot be approved.⁵³

The Council's effort is to make sure that the internship is an educational experience, supplementing and continuing the work in medical school. Something over 40 per cent of approved internships are located in hospitals owned by or affiliated with medical schools. In these the medical faculty can supervise the internship.⁵⁴

The Council approves three types of internships: "rotating," "straight," and "mixed." It strongly favors the rotating internship in which the intern is assigned to the various services of the hospital over periods of varying length. Although the Council does not propose a uniform pattern for all rotating internships it recommends that:

In rotating internships of 12 months' duration the time allotted to internal medicine should equal or exceed the time given to any other service. Assignments should be made in such a manner as to assure that each intern devotes at least three consecutive months respectively to *internal medicine* and to *surgery*. No assignment may be of less than two months' duration. In view of these two restrictions, there can be not more than three additional services, two of which should be *obstetrics* and *pediatrics*.⁵⁵

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In a "straight" internship, the intern remains in a single service for his entire period, although he may be assigned to one or more related sub-specialties. Only about ten per cent of interns are in the "straight" type. The "mixed" internship combines elements of the other two. In it, the intern may spend half his time in one service, and then divide the remaining time among several others.

The intern is part of the resident medical staff of the hospital. Many hospitals have established intern committees to supervise the educational programs of interns. Actual instruction rests largely on residents, but physicians with patients in the hospital participate for their specialties. The training program often includes, in addition to service with increasing responsibility, clinical pathological conferences, ward rounds, scheduled lectures, and special lectures by visiting physicians. During the year, the intern will work with several hundred patients who are suffering from a wide variety of diseases.

The internship is popular with hospitals and with medical graduates. Hospitals are so anxious to obtain interns that they offer a considerably larger number of internships than the number of medical school graduates in any one year. As we have said, virtually all medical school graduates take an internship before entering practice. But in spite of this happy coincidence of interest between hospital and graduate, the medical profession and medical educators are by no means satisfied with the way internships are conducted. "The real issue," say Deitrick and Berson, "is whether or not the internship can be made truly educational or what portion of it is truly educational." **

They continue:

The internship in its present form and use does not lend itself to the continuation of medical education in a formalized way.... Hospitals are not primarily educational institutions, and the staff is not

selected primarily on the basis of teaching ability. Few if any hospitals make a careful evaluation of the intern's educational accomplishment. In fact, there are as yet no standards of accomplishment for interns to achieve by the end of their internship training.⁴⁸

Hospital-conducted medical internships satisfy some and fail on others of the criteria for effective internships given above. They usually challenge the intern, and actively involve him. But they sometimes give him tasks which are beyond his present capacity, they often do not provide adequate supervision, and, most of all, they sometimes fail to help him analyze and evaluate his experience. They run the risk of exploiting the intern for the sake of the hospital, instead of using the hospital for the education of the intern. That this risk is large is confirmed by John C. Leonard, who says, "For many medical generations intern and resident training programs, especially intern programs, have been used by many hospitals as a disguise for cheap labor so that the routine medical work of the hospital might be performed at the least possible expense."⁴⁹ To overcome this tendency, Mr. Leonard proposes that hospitals either establish positions for directors of medical education, or attach themselves to medical schools for guidance in their programs.

Medical interns normally receive room and board, and a small stipend during their internship. The stipends tend to be higher in hospitals which have had difficulty in attracting sufficient numbers of interns.

It is possible that the future will see a reduced use of internships in medical education. Deitrick and Berson conclude that:

4. The internship as a medical instrument is no longer so essential as it was 25 years ago.
5. The internship is generally deteriorating in education value as it is encroached upon to an increasing degree both by the clinical clerkships and by the expansion of residency training.⁵⁰

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The Candidate Training Program of *architecture* is another internship. After completing his degree, the student undergoes three years of training in which he works as an employee in an architect's office under the title, "Architect-in-Training." Only after satisfactorily completing the three-year period can the student apply for examination for licensing as a registered architect. The program is designed to help the graduate make the transition from student to architect by a period of practice under close supervision. "In general, the function of the training program is to build upon the candidate's preparation by expanding his knowledge and skills and by illustrating their application in the actual performance of professional services."⁵⁸

The candidate is an employee of an architect. In theory and purpose, however, he is a student, or at least is in the process of transition from student to practitioner. The candidate training program, like other experience training programs, has the difficulty of resolving these two roles, that of employee and that of student. An employee is expected to do what needs to be done; a student is expected to learn what needs to be learned. For a student, experience must be organized for the purpose of learning, so that he assumes increasing responsibility for practice in the various phases of professional service. The employer of a candidate has the difficult task of relating the demands of the job to the demands of learning.

Architecture has not yet solved the problem. Too often, it finds, the experience has not been organized for learning, and candidate training has been left to accident and whim. Many architects expressed their dissatisfaction with this situation in the *1950 Survey of the Architectural Profession* conducted by the American Institute of Architects. In an effort to overcome these deficiencies the Commission for the Survey of Education

and Registration strongly recommended that candidate training be carefully organized to achieve its ends. The profession has acted accordingly so that the training provides progressively difficult experience in five areas:

1. Project research, analysis, and programming
2. The determination of the Basic Design Solution
3. The preparation of Working Documents
4. The negotiation of Construction Contracts
5. The performance of services accompanying construction operations⁶⁰

The candidate obtains experience in:

1. Office and administrative procedures
2. The economics of practice
3. Contacts with personnel associated with building; code officials; lending agencies; construction contractors and mechanics
4. Professional relations⁶¹

If training is properly organized, the candidate participates in work on projects undertaken by the architectural office or firm in which he is employed. He follows projects from their inception to their conclusion, observing first, but assuming more and more responsibility as time goes on. He reviews and discusses his experiences with the architect from time to time, and studies and investigates independently the various theoretical and generalized problems suggested by his experience. Where it is possible to do so, he undertakes individual advanced study, on a part-time basis, or he may study with other Architects-in-Training who are located in the same community.

The employing architect has the major responsibility for making sure that the program includes the range of recommended experience, and that the candidate makes the most of his opportunities. The Commission recommended two other

procedures which are now being followed. First, the American Institute of Architects issues "log-books" in which the candidate records the projects on which he has worked and the duties he has discharged, together with any studies which he has completed. Second, committees of local AIA chapters interview Architects-in-Training from time to time to assess progress and make suggestions for change. These committee members, in effect, become professional advisers for the candidate, helping him to analyze and evaluate his experience.*²

Although the candidate is an employee, architects are not agreed on what pay a candidate should receive, or, indeed, whether he should receive any. *The Architect at Mid-Century* proposes that architects consider the salary paid during the early, unproductive months of the period as a loan, to be repaid by the productivity of the candidate later on when his usefulness exceeds his salary. It estimates that such "repayment" could be completed within 18 months after a candidate starts in training.^{**}

Psychology, social work, and teaching all use forms of internship in their programs of professional education. They place it within the period prior to award of the degree, however, and they exercise a much more clearly defined responsibility for the quality of the internship than do architecture and medicine. Like medicine in the university-owned hospital, teaching sometimes uses the university-owned demonstration or laboratory school for the internship, but it more often uses schools of the community for internships. Psychology and social work use agencies off the campus.

In *clinical psychology*, the internship usually fills the third year of the four-year program leading to the Ph.D. degree. The student has already completed a clerkship, which introduced him to the elements of practice. In the internship, he works in-

tensively with relatively few patients over a long period of time. Under supervision, he may take substantial responsibility for all psychological techniques used with his patients. He interacts with patients in the clinical setting, and he learns how to report his findings and observations orally. He spends considerable time in writing reports, attending conferences, and integrating data he obtains.

His activities are not limited to patients, however. Because of the great emphasis of psychology on research, he also explores the application of research methods to problems currently under investigation in the agency where he is placed. He broadens his concerns to learn about social problems which are related to psycho-pathology and other disorders, and he investigates how society attempts to meet the problems of management, care, and rehabilitation of the mentally ill. Ultimately, he works toward the development of high standards of personal and professional ethics through analyzing interpersonal relationships with employers, colleagues, and clients which require ethical decisions and practice in evaluating his own motives.

Although the agency in which the student of psychology takes his internship is off the campus and not under university control, the department of psychology is responsible, in good measure, for the quality of the internship. It selects the agencies in which internships can be taken. It looks for agencies with qualified psychologists, psychiatrists, and social workers so that supervision of the intern can be adequate to his educational purpose. It selects agencies which have a variety of patients for study and treatment, a high quality of supervision for the intern, and a willingness to evaluate his work; and adequate space and equipment for research, a good professional or scientific library, stenographic and clerical staff, reasonable salary scales, etc.

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When the department discovers that such an agency is willing to take interns, it and the agency agree on the purposes, obligations, and content of the training. The agreement covers the stipends to be paid, the records to be kept, and the means of reporting the evaluation of the students. The agency selects its interns from students recommended by the school.⁶⁴

Three types of agencies accounted for three fourths of the internships—psychiatric institutes or clinics within a university or medical school or hospital; state or other public mental hospitals; and community clinics. The remaining fourth scatter among courts, correctional institutes, private and municipal general hospitals, institutes for mental defectives, public schools systems and special research centers. In general, the departments of psychology use a very small number of agencies. Over four out of five use no more than three agencies, and nearly half of the schools use only one.

During the internship, the student on the average spends two-thirds of his time in diagnosis; about a fifth of his time in therapy; and where it is given, about a tenth in research.

Like medicine, psychology has difficulty in keeping the school and the agency close enough together to assure educational quality in the internship. Members of the university faculties consult with the agencies on the internship programs only to a limited extent. Four out of five of the agencies have no contact with faculty members. The problems that result might be anticipated. First, since the university usually does not aid in selection beyond recommending students, the agency does not always select the students who would be the best ones for that agency. Second, though most agencies evaluate the student, the records reach the university only rarely and the university makes little use of the agency's assessment even when received. Third—and this sounds familiar—the quality of the student's training

is sometimes sacrificed to demands on the agency for service which the student can supply.

Some agencies offer no stipends to interns. Of those which do, the average amount for each stipend is about \$200-\$250 a month. University credit is awarded for internships in about 8 per cent of the agencies. In about 60 per cent, no formal recognition is given to an intern who completes his internship successfully, but about 20 per cent give a certificate or a formal letter.*⁸

Education of teachers is a function of about 1200 colleges in the United States. Of these, 125 are teachers colleges, and about 75 more consider teacher education as their major purpose.*⁹ In such a large number of institutions, wide variations in practices naturally occur. But teacher education commonly includes periods of "practice teaching" or "student teaching," in which students observe and participate in the work of schools.

Student teaching, for students pointed toward either elementary or secondary school teaching, usually occurs during the last of the junior year or the first of the senior year of the undergraduate course. It may or may not have been preceded by other contacts with children and schools and community agencies. It often covers a block of time, a quarter or semester, in which the student spends almost all of his time with one supervising teacher, who guides the student toward competence in teaching. Some schools provide student teaching within a campus laboratory or demonstration school, but most provide it in cooperating schools within the community where the university is located. Some extend their student teaching beyond the community.

Colleges provide the internship in many different ways. "Many colleges have been experimenting with a block program, sometimes called the professional semester or quarter which

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combines student teaching with various education courses."¹¹ Such a block program always includes a period in which the student spends the full day in the school. Assignment for the full day allows the student to participate in the variety of activities which teachers are called upon to perform, and aids in identifying the student with the school itself. Most important, the full-day assignment makes it possible for the student to relate his course work to his practice, using the problems identified in teaching as the basis for classroom discussion and investigation. The block program would thus include "an early contact with the teaching situation, a period of intensive study on campus, a period of full-time teaching, and, finally, a return to the campus" for the last week of the semester."¹²

As do medicine, architecture, and psychology, teacher education finds problems in supervising the internship. The school of education normally accepts responsibility for making sure that the student teaching contributes effectively to the educational program. Many colleges establish one or more positions for staff members to direct student teaching, to maintain liaison with schools and students, to select the supervising teachers in the schools, to visit and consult with students and supervising teachers during the period of internship, to conduct seminars for student teachers, and to meet with supervising teachers as a group to identify and solve common problems as they arise.

Teacher education has developed several devices to aid the student to analyze and evaluate his experiences as a student teacher. Like the "architect-in-training," the student teacher may keep a teaching diary or log to record significant experiences and reactions to be discussed with the supervising teacher or the college instructor. He may keep a "cooperative notebook" in which he and the supervising teacher record observations, questions, and comments, passing the notebook back and

forth several times a week. "The cooperative notebook commends itself as a device to encourage an exchange of ideas of more than transitory importance. Both student and supervisor are stimulated to think about what they are doing."¹⁸

Of the professions which include an internship in their educational programs, the schools of medicine and architecture concern themselves least with control and guidance of the internship. Social work schools have the greatest concern of all. *Social work* considers that "field work," as it calls the internship, and class work are so interrelated and interacting that they become the warp and woof of the curriculum's fabric. The 1952 curriculum policy statement, adopted by the American Association of Schools of Social Work on May 29, 1952, and accepted by the Council on Social Work Education upon its establishment, states that "The social work curriculum is a cohesive whole" which "should provide a framework of classroom and field courses and research within which the student may test and use theoretical knowledge, acquire professional skill, achieve a professional self-discipline, and develop a social philosophy rooted in an appreciation of the essential dignity of man."¹⁹ Since the curriculum is considered "a cohesive whole," the school of social work attempts to make sure that the field work constitutes a learning experience of a quality and significance at least equal to the classroom work. In fact, social work prefers to call field work "field instruction" to emphasize its educational character. Furthermore, schools of social work are constantly trying to relate classroom and field instruction so that each contributes to the other, and both to the growing professional competence of the student.

Field instruction in social work begins much earlier than the internship or even the clerkship in the practicums of the other professions. In most social work schools, field instruction be-

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gins within two weeks after the student enrolls, and continues throughout the two years of the master's degree program. Time is allotted to classroom and field instruction in approximately equal parts.

Field instruction is organized as "concurrent," that is, with field instruction occurring on two or three days of the week, and classroom instruction on the other days of the same week, or as "block," in which the student alternates between spending full time in classroom instruction and full time in field instruction. A survey of fifty social work schools in 1955 showed that five used the block plan only, 15 used the block and concurrent plans, although 11 of these used the block plan only "in special circumstances for part-time or special students." The bulk of the schools—30—used the concurrent plan only. The study found that the most common pattern for field instruction in these schools was two days a week in the first year and three days a week in the second year.¹²

Field instruction includes much the same content as the classroom instruction, with the important distinction that in field instruction the student is learning by participating in the work of a social work agency under the guidance of a supervisor who serves as a field instructor. The supervisor assigns cases of increasing difficulty and complexity to the student, and the student disposes of them with increasing independence, always within the policies and objectives of the agency. Through discussions with the field instructor, the student gains understanding of the agency itself, the community in which it operates, and the ways in which his cases can be handled or could have been better handled, and the quality of his performance. In general, the field instruction is expected to help the student learn how to make creative use of self, how to use appropriate knowledge and principles in the solution of problems, how to

use the field instructor's talents for help in mastering the student's tasks, how to use the powers of the agency in aiding individuals and groups, and ultimately how to identify himself with the philosophy of social work so that he grounds his thinking, feeling, and acting firmly on the ethical standards of the profession. The purpose, therefore, is the development of professional competence and a professional personality."¹²

"Creative use of self" sounds like professional jargon, and may be worth a word of explanation. A social worker, like a physician or a teacher, can be fully effective only as he becomes able to shape his reactions to fit the situation in which he is supplying the services of his profession. The patient's response to the physician's personality may be more important than his pills. The teacher may find that hostilities she unconsciously engenders block a school child's learning to read regardless of her knowledge of reading methods. The social worker may inhibit the growth of a client's independence while helping to satisfy his acute needs because she needs to feel the satisfaction of having someone lean upon her. A person in a "helping" profession must learn the discipline of responding to the client's needs rather than to his own. The art of practice combines knowledge, skill, and self in providing services. Use of self becomes creative when it can help a client establish values like health, learning, or self-reliance to replace illness, ignorance, or dependence.

In spite of considerable effort, social work schools find it difficult to hold classroom and field instruction close together. To do so, the school must bring many agencies and field instructors into close relationship with the total educational program, both in class and in agency. Although responsible for arranging for adequate field instruction, the school does not have administrative control of the agencies it uses. They

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must necessarily participate in planning and review of field instruction to assure that they and the school work toward the same objectives.

The school selects an agency for field instruction by assessing the quality of service it supplies, the qualifications of its professional staff, and its willingness to accept responsibility to provide the situations and facilities which students will need. The school may select as field instructors qualified and experienced social workers on the agency's staff who have ability, also, for teaching in the agency situation. But the school may go even further by employing a faculty member, and assigning him to the agency, where he becomes an employee of the agency and a field instructor.

To maintain coordination between classroom and field agency, the schools arrange for regular meetings of classroom teachers and field instructors. Together, these groups plan and evaluate the field experience of the students, so that the school and the agencies can understand how knowledge of theory gained from the classroom is being put to use by students in the agencies, and analyze the students' reaction to their experiences. In addition, the schools usually assign to faculty members responsibility for advising field instructors and students in field instruction on problems as they arise. Finally, a number of schools have worked out courses in student supervision for field instructors, in which they can become familiar with the objectives, method, and content of social work education.

As we have seen, professional education combines some of the elements of academic education with some of the elements of apprenticeship. With its objectives of professional competence, social understanding, a professional personality, zest for continued study, and ability to conduct or interpret research, it

gives a focus to academic education. With its concern with knowledge and its continuing effort to relate theory to practice, it gives meaning to apprenticeship. The methods of professional education draw the professor and the practitioner into the common task of molding students into members of the professions.

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CHAPTER 4

Faculty

The whole art in the organization of a university is the provision of a faculty whose learning is lighted up with imagination.

—Alfred North Whitehead

THE purposes of a university faculty are to guide the learning of students and to advance knowledge. No university exceeds in significance the competence of its faculty, for achievement of its own major purposes of teaching and research depends heavily on the quality of the men and women it engages in its work. Excellent students may rise above a mediocre faculty in their quest for knowledge and understanding, but even they will be hampered in the effort. A mediocre faculty can turn the excitement of learning into the torpor of routine, in which instruction is never "lighted up with imagination." Such a faculty will be content to repeat year after year the same conceptions and thoughts, unable to add to them the freshness of new discovery or inventive application.

Universities never end their search for brilliant or even adequate faculties. No university would remain fully satisfied with the quality of its faculty even if it could keep them all, and of course it cannot. Every faculty must be replenished as its

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members leave for other universities, defect to other occupations, retire, or die. Each university establishes criteria which it follows, consciously or unconsciously, in searching for and selecting faculty members, to assure itself of the qualities it wishes. Professional education has a particularly demanding set of criteria, because of its focus on competence in a professional field. It seeks faculty members not only with competence in scholarship but also with competence in practice, thus adding to the difficulty of its search.

As we have seen, professional education incorporates and merges elements of apprenticeship and elements of academic education. The elements of apprenticeship came first in time, since the earliest way for a student to gain competence in a profession was to serve with a practitioner until the student learned enough skills to leave and enter practice for himself. The practitioner transmitted his knowledge and skill, learned through his own practice. The student adopted these for his own, adding to them later as he practiced. In most of the professions this volume considers—for example, medicine, law, teaching, business administration, and others—practice preceded the establishment of professional schools, and apprenticeship was the usual means by which a neophyte became qualified for practice. Often practitioners themselves established the first schools as means of obtaining assistants in their work. As the first faculty members, they were more concerned with transmitting their knowledge and skills to groups of students than they were with advancing that knowledge and skill through research. Even when the professional schools first moved into the universities, they largely depended on part-time faculty members, drawn from practitioners in the community. Professional schools, of course, still depend to varying degrees upon the “practitioner-teacher.” Gradually, however, the schools organ-

ized full-time faculties for the basic teaching, using the part-time "practitioner-teacher" to enrich and supplement the work of the full-time staff. Teaching could be inseminated by the advances of research only when full-time faculty members had become customary. When this change occurred, the schools could begin to serve as leaders of professional thought and practice rather than as mere transmission belts for conveying what was already known and practiced, even though such a result does not automatically occur when full-time appointments are made. One study of professional education points out:

The important criterion—in planning education, as in other professional education—is, of course, whether the faculty members are individuals whose careers are devoted to expanding the knowledge, principles, and methods of the field, rather than merely to transmitting knowledge and methods already widely employed.²

When the professional schools discarded their major dependence upon the "practitioner-teacher," they did not wholly embrace the academic teacher. Their concern with professional competence and the use of knowledge causes them to search for the full-time faculty member who has had successful experience in professional practice. Such a person, they believe, can expand knowledge, but he can also test knowledge against the requirements of the profession so that he does not become lost in the minutiae of his subject. He can inform his knowledge, his teaching, and his research with the problems of practice. He can talk easily with practitioner and scholar, learning from both.

IDEAL OF THE TEACHER FOR THE PROFESSIONS

The concept of the ideal teacher for the professions grows out of this concern that the teacher be both a scholar and a

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other for faculty members who have obtained recognition for excellent teaching or fruitful research.

At some point, however, the supply of faculty must be replenished—not merely shifted from school to school. Persons who have not been teaching must be brought into the faculties of professional schools to replace members who retire, die, or move into other occupations. New entrants are needed also to fill the new posts created by expanding numbers of students. Even were it possible to avoid all losses from the total number of faculty members, growth in number of students would require that new faculty members be added. Losses cannot be avoided, however, for the faculty member in a professional school is often susceptible to the seductions of practice. He often has had experience in practice. His teaching is focused, in good measure, on the requirements of practice. In contrast to the teacher of English or history or philosophy, his profession is dominated, numerically if in no other way, by practitioners. In many professions, the practitioner can earn alarmingly more than the professor. So long as these conditions obtain, losses will be certain. No professional school can afford to relax its search for competent people, or lessen its effort to make teaching as attractive as practice.

The evidences of competence that deans of professional schools look for when searching for faculty members include education as defined by earned degrees, teaching experience, experience in practice, and research productivity. Not all these evidences are pertinent to every position in the professional schools. For example, teachers of the "basic medical sciences" in medical schools rarely have had experience in the practice of medicine, and usually do not hold the M.D. degree that would make practice possible. But for most positions the evidences listed are appropriate.

Degrees

Most universities consider the Ph.D. degree virtually essential for full professorships in the academic fields. Professional schools, however, vary in their requirements of degrees. In several, including nursing, architecture, engineering, law, social work, and veterinary medicine, substantial numbers of faculty members hold the first professional degree but no further degrees. In nursing, architecture, and engineering, the first professional degree is the bachelor's. Only 14 per cent of faculty members in schools of architecture have a second degree.* In nursing, "a trend is evolving, particularly in collegiate and university schools, toward requiring academic qualifications for nurse faculty which would be equivalent to qualifications required of the other faculty members of the school."¹⁰ A 1951 study made by the National League for Nursing makes it clear that the trend has not yet run its full course. At that time, 36 per cent of collegiate nurse faculty members held master's or higher degrees; 13 per cent held no degrees; the rest—slightly over half—held bachelor's degrees. Actually the proportions could hardly have been that favorable, for the data were collected only for schools which were accredited or which had applied for temporary accreditation.¹⁰ Engineering has moved considerably farther, since it looks for younger faculty members with the doctor's degree, believing that "the strongest evidence usually available to measure a background of fundamental knowledge and probable creative ability in teaching and research is an education which includes the doctor's degree." It does not believe, however, that the doctor's degree is necessary for experienced persons, where "evidence of the capacity of the individual for creative teach-

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ing and research may be gauged by other criteria, and the formal educational background is of less significance."¹¹ Young engineering teachers with only a bachelor's degree are expected to continue their education toward higher degrees.

Faculty members for law, social work, and clinical instruction in veterinary medicine often hold only the first professional degree. In each of these fields, however, a minimum of six years of college and professional school are required for the first professional degree. In law, possession of the doctor's degree—usually the Doctor of Juridical Science (S.J.D.) or Doctor of Juristic Science (J.S.D.)—which represents two years of graduate study, is not uncommon but is not required.¹² Social work is slowly increasing the number of faculty members who hold the doctorate.

In medicine and veterinary medicine, teachers of the basic sciences normally hold the Ph.D. in their fields. Clinical teachers in medicine normally hold the M.D., but since they often are specialists they have completed the usual one-year internships, plus three-year residencies, making their post-high school education extend to at least eleven or twelve years. Usually, they also have completed a fellowship or similar training in research, lasting another one to three years. Business administration depends upon the Ph.D. degree as evidence of qualification for faculty positions, and in schools which grant the Ph.D. degree over sixty per cent of faculty members hold the degree themselves.¹³ Teacher education, where possible, obtains faculty members with the Ph.D. or the Doctor of Education degree. It usually requires a doctor's degree for ranks above assistant professor.¹⁴ Almost all graduate faculty members teaching in psychology departments which award the Ph.D. degree hold the degree themselves.

Experience in Practice

Most professional schools prefer faculty members who have had experience in practice, believing that this qualification will inhibit any tendencies to overemphasize knowledge at the expense of application in the profession. The faculty members of architectural schools, for example, have an average experience in the profession of nearly seven years.¹³ I have been unable to find tabulations of practical experience for faculty members in the other professions, but several comment with considerable vigor on the desirability of professional experience. The Council on Social Work Education's accrediting standards say that "Knowledge, based upon education and *experience in social work and in the field or fields in which a faculty member is to offer courses, is essential.*"¹⁴ Business administration, law, nursing, engineering, and teacher education also prefer faculty members who have had experience in the profession. As we have seen, engineering will consider accomplishment in the profession as a substitute for an advanced degree. Clinical psychology wishes faculty members to have had at least five years of graduate teaching or clinical experience, apparently willing to accept one in lieu of the other.¹⁵ The clinical teachers in medicine necessarily have practical experience, since their teaching itself involves practice, but the selection of faculty in the basic medical sciences is more frequently based on competence in research.

Research Productivity

One of the objectives of professional education, as we have seen, is to aid students to achieve competence to conduct or interpret research. Several professions, as a result, consider research productivity as a desirable characteristic of faculty members. In medicine, this emphasis sometimes dominates se-

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lections. Deitrick and Benson found that in a majority of medical schools "the chief consideration in the selection of full-time faculty members was proved research ability."¹⁸ Law schools prefer faculty members who have already published work in their fields.¹⁹ Other professional schools, with the exception of psychology, put less emphasis on research productivity as a criterion of competence. In architecture, for example, the *1950 Faculty Survey* discovered that only 19 per cent of architecture teachers had published articles; only 6 per cent had published books.²⁰

STATUS AND SALARIES

Status

The status of faculties of professional schools should be defined in three different sets of relationships: 1) that of the faculty in one professional field to faculty in the others, 2) that of professional school faculties to other faculties of the university, and 3) that of the professional school faculty to practitioners and other members of the profession. Data are not available to support comparisons of status in these three relationships, or indeed in any one of them.

One index of the relative status of faculty in professional schools is the proportion of faculty members who hold full professorships. Comparisons are not available for the ten professions, but a survey conducted in 1948 compared law, business, engineering, and architecture. It found that about 60 per cent of faculty members in law held full professorships, but only 32 per cent did in business, 28 per cent in engineering, and 27 per cent in architecture.²¹ If proportion of full professorships is a valid indicator of status, law schools have twice the status of the others.

In the absence of data, I can only give impressions of the

relative status of professional school faculties to those of other divisions on the campus. Faculties in the older professions of law and medicine may equal or exceed the status of the liberal arts and science faculties. Those which are well-established, like engineering or architecture, may convey status equal to the liberal arts and sciences. More recently established professions, like social work, teaching, and nursing, do not yet convey equal status to their faculties. There may be other reasons for these distinctions than the recent vintage of some professions. The usual length of training for faculty members may be less—as for example in engineering, nursing, and social work—than for the traditional doctorate degree of the liberal arts college. Furthermore, the predominance of women, and therefore of women students, in social work, teaching, and nursing, may cause the predominantly male faculties of the other schools and departments to look on these fields with less respect. In addition, the status of the profession for which the education is undertaken is reflected, to some extent, in the status of the faculty of the corresponding professional school. As part of the concept of free enterprise, we tend to give high status to the "fee" professions, whose practitioners normally are entrepreneurs, subject to the daily test of having their services evaluated by the willingness of individuals to pay for them.

I also have the impression, without data, that the same differences carry over into the relative status of the faculty member to the practitioner, except that the effect is reversed. I would judge that the nurse, for example, attributes a higher relative status to the faculty member of the nursing school than the successful physician does to the professor of physiology in a medical school, unless the latter has distinguished himself through a research discovery of wide applicability. But data are lacking. A careful study would be helpful.

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Salaries

All professional schools are convinced that salaries are too low, and cite their struggles to recruit faculty members as evidence to support this judgment. Professional schools are, in fact, in a difficult position because returns from practice are often higher than salaries for teaching. Since professional schools wish to have faculty members who have had successful experience in the profession, they are in direct competition with practice to obtain and retain faculty members. The difficulties are greatest in the "fee" professions, for here the income of the practitioner is limited only by his competence and his conscience, whereas the teacher in the same profession works for a fixed salary which seems attractive only in periods of economic decline. To offset the urge toward practice, many medical schools allow clinical faculty to supplement school salaries with income from private practice. Even so, the average 12-month salary for full clinical professors paid by 32 medical schools in 1949-50 was about \$14,000. In the same year, the average for full professors in the medical basic sciences in 34 medical schools was about \$11,000.²² Since the clinical faculty member often can supplement his salary by practice or consultation, and the basic medical science faculty member usually cannot, the difference in total income was probably much greater than \$3,000. Whatever the difference, it reflects competition with practice.

Engineering finds that restrictions on university salaries are galling. The Grinter Report points out that "it should be recognized that, in contrast with the situation in many academic fields, industry is inherently attractive to many of the best engineering minds." It recommends the establishment of a salary scale "comparable to the income earned by outstanding

practicing professional engineers as indicated by the published surveys of national societies."²³

Data comparing salaries in the different professional schools are available for 1948-49, one year prior to the collection of the data on medical schools given above. In 1948-49, the median 10-month salary for full professors in law was \$7,100; in business, \$6,500; in architecture and engineering, \$5,800.²⁴ Although these figures are not strictly comparable with the figures for medicine, they make it clear that medical faculties led the list by a substantial margin.

More recent data are contained in a study made by the U. S. Office of Education.²⁵ The mean salaries for full professors employed for over ten months and those employed for no more than ten months are given below. In medicine, veterinary medicine, and nursing, more faculty members were employed for more than ten months than there were employed for ten months or less. Since psychology is a part of the graduate school, the figure for the graduate school probably represents psychology fairly closely.

	<i>No more than 10 months</i>	<i>Over 10 months</i>
Medicine	\$12,240	\$13,410
Graduate Business	12,100	— (only 1 institu- tion reported)
Law	10,860	9,390
Graduate Education (Public teachers colleges)	10,760 (7,440)	12,090 (7,580)
Social Work	9,800	7,830
Engineering	9,250	10,040
Graduate School	9,190	— (only 1 position reported)
Veterinary Medicine	8,950	10,280
Nursing	7,670	7,460

schools receive higher salaries than those in other parts of the university. Salaries in professional schools may not be high enough to make recruiting easy, but they do reflect, to some extent, competition between the university and practice for the faculty member who can choose between teaching and direct service in a profession.

IMPROVEMENT OF TEACHING

Professional schools are not always successful in their search for ideal faculty members. A number have made proposals on ways to increase competence in teaching, particularly among the younger faculty members. In engineering, for example, the Committee on Improvement of Teaching called upon over 100 faculty committees to aid it in reaching conclusions. It urges that university administrators—presidents and deans—make it known that they value good teaching, as a first step toward improvement. The report of the committee makes several specific recommendations. It proposes that groups within the engineering faculties make the improvement of teaching a topic for discussion. It suggests that "members of the staff of the school of education should be invited to present some matters of basic importance to teachers."²² It sees merit in assigning a younger teacher to an experienced faculty member so that the younger can audit a course given by the more experienced teacher and discuss with him the methods employed. It strongly encourages engineering schools to appoint committees for improvement of teaching which can work to discover improved methods of teaching and can stimulate faculty members to experiment with them. Finally, the report proposes "that special schools or postgraduate training programs for the specific purpose of aiding teachers to improve their methods of instruction be established in strategically located institutions."²³

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In this tabulation, engineering, nursing, and public teachers colleges are undergraduate programs leading to the bachelor's degree. For comparison, the mean salary for full professors in public liberal arts colleges is \$8,520, and in private liberal arts colleges is \$6,540, both for no more than 10 months. The figures given for the professional schools cannot be divided into ones for public and private institutions.

Only the mean salaries for full professors in public teachers colleges and nursing fall below the comparable mean salary in public liberal arts colleges. Only the mean salaries for these two fields and veterinary medicine fall below the mean salary for full professors in the graduate school.

Two conclusions are suggested by these data. First, although medical school faculties continue to receive the highest salaries in the professional schools, the amounts the universities have paid in medicine have not increased rapidly in the last ten years, certainly not to the extent that they have in law, business, and engineering. Nevertheless, "The maximum salary reported by a professional school was for the rank of professor (\$30,700) by a school of medicine for more than 10 months' service. For service of no more than 10 months, the maximum salary was also reported by a medical school for a professor (\$28,000)." ¹⁴ It should be remembered that many medical school faculty members can supplement their university salaries by private practice.

Between 1954 and 1957, faculty salaries increased slightly over 20 per cent. "While this increase is significant in that it equals the gain during the earlier 7-year period (1947-54), it still has been slower than the increase of professional salaries generally and has made only a slight gain on the loss in purchasing power during the past 25 years." ¹⁵

Second, with some exceptions, professors in professional

schools receive higher salaries than those in other parts of the university. Salaries in professional schools may not be high enough to make recruiting easy, but they do reflect, to some extent, competition between the university and practice for the faculty member who can choose between teaching and direct service in a profession.

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Other fields have undertaken similar steps to improve teaching. The American Institute of Architects has conducted two-week Institutes for the Teaching of Architecture. Many teachers have made visits to other schools to observe teaching methods. Most teachers would like to participate in temporary exchanges of teachers among schools of architecture for a term or year. Finally, the profession has suggested annual national citations for outstanding teachers.²²

The Association of American Medical Colleges has held a series of teaching institutes that have explored various facets of medical instruction, and has published the discussions of each.

Several professions have journals which devote considerable space to improvement of teaching. These include, for example, the *Journal of Architectural Education*, the *Journal of Medical Education*, the *Journal of Engineering Education*, the *Journal of Legal Education*, and the *Journal of Teacher Education*. Journals of other professions, even though not wholly devoted to education, often include studies and suggestions on teaching.

Improvement of teaching will continue to be a concern of the professional schools. With the exception of teacher education, no professional school considers that preparing students to teach is a major objective. Professional schools educate for practice, and students obtain competence to teach by chance or experience. So long as this situation continues, efforts to improve teaching will necessarily come after the graduate of the professional school has entered teaching. Dr. James H. Means is struck by this strange fact. He says:

In passing, I may point out that no medical teachers—and I gather that none of the rest of you either—are ever by any chance taught how to teach. Apparently it is generally assumed that if a person

in a professional discipline possesses a scholarly knowledge of his subject, he can, *ipso facto*, teach it adequately. But such an assumption is obviously not justified. Some learned scholars are very poor teachers, and some less learned are good teachers.²¹

Two solutions are possible. Under the first, professional schools will have to identify prospective teachers and give them instruction in teaching. Nursing, in its master's degree program, does this. Under the second, schools will have to continue and expand their efforts to help young instructors learn to teach without too great damage to their first students.

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CHAPTER 5

Recruitment and Selection of Students

During the school period the student has been mentally bending over his desk; at the University he should stand up and look around.

—Alfred North Whitehead

INTRODUCTION

COLLEGES and universities determine the size and characteristics of their student bodies by two complementary and overlapping objectives—to meet the demands of students for education opportunities, and to satisfy the needs of society for educated people. On the whole, colleges and universities have tended to plan student capacity on the basis of projected student demand. In the absence of clear definitions and projections of social need, they can do little else.

Yet the assumption that there is inevitably a happy coincidence between student demand and social need is shaky at best. Guidance programs are not widespread enough to provide students with the information they need to make intelligent choices among occupations. Student choices, which taken together make up student demand, may lack even elementary under-

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standing of social need, and can often be swayed by extraneous factors of glamor and prestige. Furthermore, if social need and student demand are to coincide, occupations of greatest need should provide the greatest returns in money, or status, or personal satisfaction, and the facts about them must be made known to students during the long period in which they grow from fantasy, to tentative, to realistic choices. Usually, neither of these conditions is met. Eli Ginzberg and associates have reached a preliminary conclusion that choosing an occupation is a process of considerable length and is largely irreversible. The period of what they call "tentative choice" begins between ten to twelve years of age, and the period of "realistic choice" begins between sixteen to eighteen,³ or just about when the student is getting ready to enter college. This process, lengthy, complex, and often uninformed as it is, may serve adequately to guide entrance of a student into the general programs of undergraduate education. But it is hardly credible that its results can serve by themselves as an adequate base for planning professional schools, which must satisfy the growing needs of society for people capable of supplying professional services. The professional schools must consider both student demand and social need. They cannot ignore demands of students, but they must also be sensitive to the needs of the professions, actively recruiting students when demand falls below needs, and consciously limiting admissions through greater selectivity when needs are expected to decline below student demand. If they flood the market with too many graduates, their graduates can expect the frustration of employment below their capacities; if they fail to fill the social need, they may cause lowered standards of performance since the profession may be forced to use untrained people to supplement the inadequate number of graduates.

Needs of the Professions

Projecting needs of the professions is fraught with difficulty and uncertainty. Precision is beyond hope. There are too many variables, too many unforeseen events, too many changes in taste or technology, to allow certainty. Furthermore, some assumptions about the future are unavoidable, for a depression, a war, or even a secure peace could violently destroy the validity of any predictions.

Even though precision is not possible, the schools can look to major trends for guidance. M. H. Trytten points to population growth, the rise of technical knowledge, and the growth of social and economic institutions as factors which will continue to expand needs for professional people.¹ Dael Wolfle details projected needs for professional people, saying that "for many fields the demands [for graduates] will probably be higher than the supply. Employers must expect a continuing manpower shortage."² Both are convinced that "There will never be too many able people."³ But Wolfle carefully adds the caution that "There are not enough established jobs in scientific and other specialized areas to absorb all persons who could with proper training become qualified for work in those fields."⁴ He seems to be saying that we cannot afford to base planning of professional education solely on student demand, even when modified by minimum standards for admission to the schools. Recruitment of high quality students, particularly those who might otherwise never attend college or professional school, is a desirable policy. It will require active effort to meet needs of the professions. Ideally, the needs can best be met through selective recruitment which focuses on those students of high quality who do not normally reach professional schools.

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sional schools, because they lack motivation or money. Through providing scholarships, disseminating information on professions, and other efforts, the schools try to capture these capable people for the professional fields. As they accomplish this, the quality of the student and ultimately of the practitioner will rise. Recruitment has the purpose not only of getting enough but also of getting the best students.

This search for the best students gives meaning to continued recruitment efforts for all the professional schools even when the number of students in college will rise rapidly in the near future. As the number of students in college rises, the number of applicants for professional schools will also rise. In fact, if the experience of the past several years continues, student demand for professional education will rise more rapidly than will the total number of college students. There will be little difficulty in filling professional schools with students who meet minimum standards. Beyond that, the search for the best qualified students will continue.

Along with that search will come more refined methods of selection to help assure the quality of the students admitted. The admissions committee is a crucial group in the life of any professional school. More and more, the schools are studying their procedures to find ways of making more nearly valid choices. They are aware that students who cannot or do not complete their study and enter the profession have wasted the opportunities other students might have used successfully.

As a result, the professional schools are looking at the whole process of selection with critical eyes. No school is wholly satisfied; none will ever be. But many schools and professional associations are modifying their procedures and experimenting with new methods.

The Present Situation

At the moment, active recruitment is going on as the schools try to meet the shortages present in most professions. Often the professional associations assist through conducting national campaigns to draw students into their fields. Professions compete with each other, offering inducements of scholarships and opportunities for jobs to qualified men and women who chose "properly." And always in the back of the minds of professional schools and professional associations lies the hope of attracting those men and women who graduate from high school with honors but who never appear at the college doors.

NEEDS

The desire to attract the best possible students makes all professional schools interest themselves in recruitment, but naturally those professions which suffer the severest shortages are the ones most concerned. These include nursing, social work, and teaching, and possibly, clinical psychology. In contrast, architecture, business administration, engineering, law, medicine, and veterinary medicine, have usually enjoyed the pleasant situation in which the number of applicants has exceeded the number of places in professional schools by a good margin. In each year since 1924, for example, the number of applicants for medical schools has exceeded the number of places, making a choice among applicants possible.⁷ Selections have not been as favorable recently as they were in 1950-51. In that year 40 percent of first-year students in medical schools had had "A" averages in their college grades, as opposed to only 16 percent in 1956-57.⁸ Veterinary medicine has nearly paralleled medicine in the ratios of applicants to student places, and the demands in engineering and law have been high. In business

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administration, the number of bachelor's degrees granted fell from about 25,000 in 1950 to about 13,000 in 1954.¹⁰ This drop may be temporary, and it has not stimulated major recruiting efforts. In architecture schools, enrollments increased 163 percent between 1939 and 1953.¹¹

Enrollments of students in nursing, social work, and teaching have not kept pace with the demands for professional services. In each of these fields, therefore, the schools and professions are making strenuous efforts to attract more qualified students, since the professions cannot be adequately staffed until more graduates enter them. In clinical psychology, also, the number of graduates has become too small to satisfy the profession's needs, because of rapid expansion of demands for clinical psychologists in mental hospitals and clinics, in industry, and in school systems.

NATIONAL EFFORTS

Nursing, social work, and teaching have all been engaged over the past several years in national efforts to increase the number of students entering their professional schools. "Nursing . . . has through a long, vigorous, well-planned, and well-financed recruitment program, been able to improve its position materially in very recent years."¹² Nursing has used leaflets, radio spot announcements, motion pictures, posters, advertisements, and other means to attract nursing students. Teacher education has used many similar means, and has stimulated the organization of Future Teachers of America clubs in high schools to encourage young men and women to enter college and prepare for teaching.

Social work has conducted a national recruitment program of wide scope since the inception of the Council on Social Work Education in 1952. According to Dr. Ernest F. Witte, Execu-

tive Director of the Council, "by the next year it had become painfully obvious that the number one problem confronting the field was the continuing decline in the number of persons choosing social work as a career. The Council gave this problem the highest priority in its program and has carried on a national recruitment program beyond that which its meager resources justify."¹²

The council established a national Committee on Careers in Social Work, which drew together into coordinated action the resources of the social work agencies and schools. Together, they have published a number of pamphlets for national distribution, prepared a film strip for use with groups, and stimulated publicity through newspapers, magazines, television, and radio. The Council has handled all inquiries about social work as a career and about education for the field, some 15,000 to 20,000 a year. It has selected pilot centers for testing the effectiveness of recruitment methods and materials in Boston, New York, Philadelphia, Baltimore, and Virginia. It provides direct assistance to state and community recruitment efforts. It consults with many national agencies on their scholarship plans, and biennially publishes *Social Work Fellowships and Scholarships in the United States and Canada*, distributing over 7,500 copies to interested persons each year.¹³

FINANCIAL AID

Most professional schools offer some scholarships or fellowships to aid students to defray part of the costs of education. Other schools share in the distribution of university-wide scholarships and fellowships that may be awarded to students without regard to their fields. Veterinary medicine, business, and engineering make little mention of scholarships, although some are available. At the other extreme, some 70% of all

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full-time social work students received some form of financial aid during 1955-56.¹⁴ In 1954, the median grant was \$1,215.¹⁵ Psychology benefits from the interest of the National Institute of Mental Health, U. S. Public Health Service, which provides fellowships for the second, third, and fourth years of graduate work. Nursing and medicine both have scholarships, although they are not as numerous as in some of the other fields. Practically all law schools have some scholarships, and almost all schools of architecture offer some, but not much. The maximum amount for scholarships available to an architecture school in 1950 was \$9,000; the minimum, \$25.¹⁶

In a few fields, medicine and teaching, for example, some states provide scholarships.

SELECTION

Characteristics Desired

To make selection of students have meaning, professional schools attempt to define the characteristics of the students they desire to enter professional education. Some have fairly precise specifications; others are content to state their desires in more general terms.

Personality characteristics:—Some professions define the kind of personalities which they feel are suitable for their fields. Thus, law has stated that it will select students who can demonstrate "A. comprehension and expression in words; B. critical understanding of the institutions and values with which the law deals; and C. creative power in thinking."¹⁷ Social work, as another of the "helping" professions, expects its schools to select students "who are intelligent, healthy, emotionally stable, and whose previous preparation qualify them to go on to graduate professional study."¹⁸ Nursing considers "personal and social fitness," and "physical and mental health," in selecting

students.¹⁹ Medicine also looks for more than scholastic ability. Deitrick and Benson state:

The experience of the past half century has strengthened the conviction of medical educators that the good physician must be a man of character, dependability, emotional balance, and sound orientation, as well as scholastic attainment. It follows that medical schools must seek to find, identify, and admit applicants who possess these desired qualities.

The medical schools studied indicated that they strongly favored a careful evaluation of the character and personality traits of the candidate.²⁰

Psychology wants its students to have academic ability, but in addition, it hopes that the students selected will have demonstrated an active interest in people and will have built a broad base of human contact through direct relations with ordinary and unusual persons, and through the vicarious experiences of literature. Other personality traits psychology desires include flexibility, tolerance, stability, originality, resourcefulness, integrity, and a sense of responsibility.²¹ Teaching's desires are similar.

Engineering puts somewhat less emphasis on personality characteristics, but does wish for proficiency and understanding—proficiency in the use of English and mathematics, and understanding of science, particularly physics and chemistry.²² The other "facilitating" professions—architecture, business administration, and veterinary medicine—have not defined personality characteristics which they desire, in any general way.

Pre-professional study:—All professional schools which award a bachelor's degree as the first professional degree require that students wishing to be admitted present evidence that

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they have graduated from high school. Beyond that requirement, however, these schools—architecture, business, engineering, nursing, and teaching—establish few prerequisites. Engineering is perhaps an exception. It says:

Such students should normally accumulate at least three units of English, four of mathematics, and at least one unit of physical science if they are to make satisfactory progress in engineering schools whose curricula are organized on a high professional level . . . such students should stand in the upper quarter of the overall integrated group of high school graduates. It is suggested that pursuit of vocational courses should be discouraged as preparation for engineering and that not more than two of the sixteen units for entrance should be considered from drawing, shop, or other vocational work. Additional background in mathematics, science, and humanistic and social courses is of far greater benefit to the student.²³

All architecture schools require mathematics, three out of five require English, and less than one out of two requires science. English is the heaviest requirement.²⁴

The other five professional schools—veterinary medicine, law, medicine, psychology, and social work—require from two to four years of undergraduate work in college to qualify a student for admission. Social work and psychology both require a prior bachelor's degree, but neither defines the content of the degree in detail. Psychology recommends biological science, social science, and/or physical science, and social work recommends the social sciences, without specifying the extent or kind that should be taken. Kenneth E. Clark has discovered, however, that about $\frac{2}{3}$ of first-year graduate students in psychology in 1954 had completed an undergraduate major in psychology.²⁵ Law requires three years of college work before admission, but is equally permissive on content. Only veterinary

medicine and medicine define the preprofessional curriculum in any detail.

Since 1949, veterinary medicine has required two years of college prior to admission to professional school, and a sizeable number of applicants have taken more than the two-year minimum. Of the 60 semester hours in the usual two academic years, all schools "require at least 12 semester credit hours in chemistry, including at least one course in organic chemistry, at least 6 hours of physics, at least 6 hours of zoology (biology accepted in some cases) and at least 6 hours of English. Some have additional course requirements."²⁴ At a minimum, therefore, 30 of the usual 60 semester hours are prescribed by the preveterinary curriculum.

Although most medical schools (73) require three years of undergraduate work prior to admission, they prefer candidates with bachelor's degrees.²⁵ "Biology or zoology, inorganic and organic chemistry, physics, and English are the specific course requirements of most medical schools."²⁶ These requirements range between a minimum of 27 semester hours at Cornell and Buffalo to 78 semester hours at Ohio State University. Most students expecting to enter medical school "major in the sciences or take a standard 'premedical program' that is largely science—this was true of 82 percent of the 1956 freshmen."²⁷ In addition to the required preprofessional courses, many medical schools list "recommended electives." Often students have chosen these expecting that doing so would increase their chances of admission. According to the Association of American Medical Colleges, this belief is inaccurate. The Association says, "On the whole the medical schools mean the suggested electives to be just that—suggestions for students who have no definite preferences of their own in regard to choosing elec-

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tives."¹⁰ On analysis, therefore, the presumed rigidity of medical school admission requirements seems more a matter of confusion than of fact.

Methods of Selection

Business and nursing, as undergraduate fields, often depend largely upon the selection measures of the university rather than upon special ones of their own. There is no national test used in selection of undergraduate business students. The National League for Nursing encourages nursing schools to use the NLN Pre-Nursing and Guidance Examination as part of their selection procedures. A number of architecture schools also accept, without further assessment, applicants who meet the admission requirements of the college. Other architecture schools are more discriminating. These schools distinguish among applicants by grade averages or class standing, even though only three schools require as high a standing as the upper third of the high school class. Also, they use admission tests, particularly the College Aptitude Test, the American Council on Education Psychological Examination, and what is called an architectural aptitude test, but which explores general rather than architectural aptitude.

Use of tests:—Neither the architectural schools nor the profession is satisfied with present methods of selection. *The Architect at Mid-Century* comments: "Most important, however, would be the development of a thoroughly validated aptitude test gauged to discover traits and capabilities of proven correlation to professional competence. . . . Until this is accomplished, the selection of students will remain primarily a process of self-selection by trial and error with all of its accompanying frustrations, waste, and embitterment."¹¹ Walter A. Taylor expresses a similar view:

... for the good of the profession and the elevation of professional education in architecture there should be greater selectivity in admitting new students. To admit large numbers of students without screening them carefully lowers the achievement of the professional school, wastes its energies on the incapable, and often does much damage to students who are cast out as failures.³¹

The American Institute of Architects, the architectural schools, and the Educational Testing Service are developing an aptitude test designed to overcome these difficulties.³²

Engineering education has had a long history of concern with aptitude tests. Dr. I. L. Kandell found that "the development and application of tests to discover ability to study engineering have had a longer history than either medical or legal aptitude tests."³³ In 1936, over 78 percent of 94 engineering schools were using tests with entering students. Only 6 of the 94 used the tests as a basis for admission, however.³⁴ Inadequate measures in selection may be one cause of the high proportion of students who fail to complete the engineering course. Efforts to devise more effective aptitude tests in engineering continue. The Educational Testing Service is working closely with the American Society for Engineering Education and other engineering organizations to this end.³⁵

Some people "claim that anyone—with or without proper academic qualification—can enroll in schools of education."³⁶ In answer, the National Education Association records the factors used by schools of education to select students.

The selective admissions factors used by a great number of teacher-education institutions are completion of high-school course; scholarship in high school; rank in high-school class; completion of certain prescribed subjects in high school; scores earned on examinations including entrance examinations, state-wide tests, intelligence tests, teacher-aptitude tests, reading tests, and personality tests. . . .³⁷

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Professional schools in the five fields which admit students after they have completed at least two years of college use tests to a considerable extent. Law schools supplement other information by use of the standard Law School Admission Test, prepared by the Educational Testing Service, and used for the first time in 20 law schools in 1949.⁴⁰ The test has proved to be convenient for students, since it is given at a number of places throughout the country, and is better standardized and less expensive than entrance examinations prepared and given by individual law schools. It is now administered four times a year.⁴¹

In medicine, as in law, a nationally administered test is an important part of the selection procedures. The Medical College Admission Test, developed by the Educational Testing Service for the Association of American Medical Colleges, was first used in 1947. It is divided into four parts aimed at ascertaining verbal ability, quantitative ability, knowledge of modern society, and science ability.⁴² It has become so popular that all medical schools either require it or recommend that every applicant take the test. In 1957, nearly all the freshmen who entered medical school had taken the test, which is given twice a year.⁴³

Although use of the test is well-nigh universal among medical schools, opinions differ as to its merit. Deitrick and Berson were unable "to find that any well-controlled experiment was under way in a medical school for determining its predictive value. It was nevertheless true that many members of admissions committees interviewed assumed the complete predictive validity of the test and considered the applicant's MCAT score a very important factor in evaluating his credentials."⁴⁴ On the other hand, the Association of American Medical Colleges reports that only 27 percent of 534 medical school admission

committee members attach "great importance" to the MCAT scores in evaluating the intellectual characteristics of applicants. The rest attach "some importance."⁴⁴

Psychology departments often employ the Graduate Record Examination and a number use the Miller Analogies Test. The University of Michigan and the Veterans Administration have collaborated in an elaborate experimental study to assess other measures of selection. They concluded that university staff members could predict the academic success of students by using customary procedures almost as well as they could with much more complex ones. None of the more elaborate measures increased the accuracy of prediction sufficiently to warrant their greater costs.⁴⁵

Social work and veterinary medicine have not yet adopted the use of national tests as part of their student selection procedures.

Other measures:—All professional schools use other methods of selection than tests. The most commonly used is the student's scholastic record, either from high school or college. Members of admission committees for medical schools place greater weight on "over-all grades from college transcripts" than on any other factor in evaluating intellectual characteristics. Three-fourths of them consider these grades of "great importance," and the other fourth consider them of "some importance."⁴⁶ Psychology, too, has found that past academic grades are the most valuable single predictor of intellectual ability.⁴⁷ Social work has reached a similar conclusion, with particular concern for academic accomplishment in the social sciences.⁴⁸ Furthermore, in engineering, "... research studies consistently point to the previous scholarship record as one of the best single measures... in predicting the individual's chances for successfully completing a college engineering

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course." "The Yale Law School relies more on transcripts of students' undergraduate work than it does on the Law School Admission Test, and a number of other law schools probably do also."⁵⁰ In general, the professional schools use tests to supplement, not replace, transcripts, and find that grades are better predictors of success than test results.

The intermediate and graduate programs of professional education often include interviews as a means of assessing other than intellectual qualities of prospective students. Medical schools use interviews to obtain information on applicants' personal and social qualifications and potentialities for medical careers. In 57 medical schools, representatives interviewed every one of the 1957-58 freshmen before they were admitted, and in 11 more schools, 90 to 99 percent of the freshmen were interviewed before admission. Psychology departments frequently use admission interviews, but they are sceptical of the results, believing that the interviews may lower rather than raise the validity of the selection procedures because students will reveal only those characteristics which they think will best qualify them for admission.

Social work has done most to make preadmission interviews convenient for schools and prospective students. It has organized a system which can hold the interview near the student even when he is located at considerable distance from the school to which he is applying. The Council of Social Work Education, following a study of admission procedures, collaborated with the New York School of Social Work⁵¹ in conducting a series of workshops on admissions, from which it enlisted 115 interviewers located throughout the country. These persons, and other interviewers since added to the Council's roster, may be used by any school to interview applicants who are located in places too distant for interviews on the campus. The

roster does not supersede a school's use of its own faculty and alumni as interviewers, but it serves as a useful supplement to the school's resources.

Tests, grades, and interviews—these are the major devices which the professional schools use to find a basis on which they can judge the quality of an applicant. Some schools ask for an autobiography in writing. Some ask for letters of recommendation from former teachers and friends. All would like to discover more nearly valid means of predicting success in the professional school, and by implication, therefore, success in later practice.

Results of Selection

As we have suggested earlier in this chapter, the quality of students in professional schools depends upon the quality and number of applicants, and upon the validity of the selection procedures which sort out the better from the poorer applicants. If the quality of the student body is low, the cause may lie either in inadequate recruitment or in ineffective selection. Since, as we have also seen, the professions vary substantially in their attractiveness to students, comparing the quality of student bodies may tell nothing at all about recruitment or selection procedures. It may merely reflect the relative attractiveness of the professions considered.

With these cautions before us, it may be instructive to look at some of the indices now available on the intellectual capacity of the student bodies in the various fields.

Selective Service College Qualification Test:—At the request of the Selective Service System, the Educational Testing Service designed a test for draft registrants enrolled in American colleges. It gave equal weight to verbal and quantitative ability. A student who scored above the "cut-off" point was to be de-

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ferred. A student who scored below the cut-off point was to be drafted as soon as his number was reached. The test was administered only to male students, since only they were subject to the draft.

Nearly 340,000 students took the test in the summer of 1951. The Educational Testing Service (ETS) analyzed the performance of registrants in each of several undergraduate fields, based on a 10% random sample of registrants, selected at each testing center. It arrived at the following estimates of performance by fields:²¹

Major Field of Study	Estimated Percent of Registrants Equaling or Exceeding Critical Score (C. S.)			
	Freshman (C. S. 70)	Sophomore (C. S. 70)	Junior (C. S. 70)	Senior (C. S. 75)
General Arts	48	52	73	—
Humanities	52	62	70	48
Social Science	57	67	74	51
Education	27	39	44	20
Business and Commerce	42	53	65	43
Physical Science and Mathematics	64	76	82	68
Engineering	68	79	88	67
Biological Science	59	62	72	46
Agriculture	37	48	52	29
Miscellaneous	38	35	48	29
All Fields	53	62	71	50

In terms of the undergraduate curricula for professions this volume considers, the category of senior in "Social Science" includes first-year law students, "Engineering" includes architecture, "Biological Science" includes nursing, as well as pre-medical and pre-veterinary students, and Education includes coaching, occupational therapy, physical education, and recreation, as well as the more usual divisions of Education like elementary education, secondary education, school administration, and adult education, among others.

Although the figures show wide variations among the different major fields, they are difficult to interpret. It is possible

that they might have changed substantially in Education and Biological Science if women had been included among those taking the test. Perhaps no interpretation should go beyond that provided by ETS itself. Its study states:

Comparisons between the listed major fields must be made with caution because of the many arbitrary decisions that were required in assigning registrants to these major fields. . . . "Education," the lowest-ranking field according to the data given, did not include students who might be intending to teach a subject categorized in one of the other major fields if they did not mention their intent to teach. Registrants studying physical education constituted a sizeable portion but less than half of the group coded "Education."

"Engineering" and "Physical Science and Mathematics" had the highest percentages of registrants equalling or exceeding the critical scores. "Social Science" is also consistently above average. "Biological Science" for freshmen is above "Social Science," but is about average for the sophomores and juniors and below average for the seniors. "Humanities" is slightly below average in three of the four years in college. "Agriculture" has percentages consistently below those for the country as a whole as does "Business and Commerce" to a lesser extent.

These major fields give different relative emphases to verbal and quantitative types of material. "Humanities" and "Social Science" depend more on linguistic aptitudes while "Engineering" and "Physical Science and Mathematics" are more quantitative in nature. The test was developed to give equal weight to verbal and quantitative aptitudes. If this relative weight had been changed, the relative ranks of the various major fields might have changed."¹²

The Graduate Record Examination:—The Graduate Record Examination, also administered by the Educational Testing Service, is used by a number of graduate schools and departments to measure a student's ability to undertake graduate

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work. It is composed of an aptitude test of general scholastic ability for graduate work, divided into verbal ability and quantitative ability, and an achievement test in each subject-matter area. If valid, the test results reflect the relative quality of candidates in the different fields. Most of the fields are graduate and not professional, but graduate education, graduate engineering, and graduate psychology are included in the ETS studies.

On the Aptitude Test—Verbal Ability, the mean of the scaled scores were for Education, 456, for Engineering, 549, and for Psychology, 588. On the Aptitude Test—Quantitative Ability, the mean of the scaled scores was Education, 461, Engineering, 695, and Psychology, 542. On the Advanced Test, the mean of the scaled scores were for Education, 489, Engineering, 639, and Psychology, 558, although the means on the Advanced Tests are not strictly comparable since they do not have identical ranges of possible scores.^{**} Graduate students in psychology outscore graduate students in education and engineering in verbal ability, and fall behind engineering students in quantitative ability and on achievement in subject-matter. Education trails in all three.

America's Resources of Specialized Talent:—The volume *America's Resources of Specialized Talent*,^{**} prepared for the Commission on Human Resources and Advanced Training by Dael Wolfe, contains a detailed statement on its efforts to define the characteristics of students entering specialized fields. The basic data were gathered from the Commission's study of students who entered 41 colleges and universities in the fall of 1946. Most of the emphasis of the study rested on intelligence.

Members of the ten professions as a group average much above the total population in intelligence, because of the fact that they are college graduates. But the professions are not

equally high in intellectual ability. "On the average, the members of some groups are somewhat brighter than are members of other groups, although there is much overlapping from one field to another." ¹⁶ These distinctions can be found not only in high school, but in college, university, and professional school. According to Wolfe, "some fields attract, or admit, students of a higher intelligence level than are attracted to other fields, and . . . the differences among the fields are about the same regardless of the educational level at which the students are studied."¹⁷ Furthermore, these differences have not changed substantially in the thirty-year period between 1920 and 1950, according to data from records at Ohio State University.¹⁸ The persistence of these differences, both in the various levels of education and over periods of time, "support the generalization that intelligence test data gathered on students specializing in different fields are truly representative of persons working in those fields."¹⁹

For the sake of comparison, the Commission's study converted various intelligence test scores to those of the Army General Classification Test. The comparisons given below list the scores by fields at the 10th percentile, the 50th percentile, and the 90th percentile. They therefore reflect the range of scores as well as give the median score. They are arranged in descending order of median scores.²⁰

Data are not given for architecture. For the four other undergraduate fields, the data for college graduates are given below.

Field of specialization	Percentile scores (on AGCT Scale) of each group	
	10	50
Engineering	110	124
Nursing	108	120
Business and Commerce	106	119
Education, general	102	118
All fields combined	107	121

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Of the five professions which require college work as prerequisite for admission, data are not given for veterinary medicine. For the other four fields, data are given below for graduate or professional school students.

Percentile scores (on AGCT Scale)
of each group

Field of specialization	10	50	90
Medicine (medical school students)	114	127	140
Psychology (Ph.D. recipients)	120	137	158
(graduate students)	118	132	144
Law (law school graduates)	112	124	135
Social Work (graduate students)	107	121	133
All fields combined	109	124	139

A number of comparisons can be drawn from these data. In the undergraduate professions, engineering and nursing form one group, in which the two are fairly close together and both above the weighted average for all fields of undergraduate specialization. Business and education are also close together, both falling below the average for all fields combined.

In the intermediate and graduate fields, psychology and medicine form one group also, though psychology, both for Ph.D. recipients and for graduate students, is appreciably higher than medicine. Both are higher than the weighted average of all fields combined. Law and social work form a second group, in which law is about the same as the average for all fields combined and social work falls somewhat below.

In general, the scores of students in the intermediate and graduate professional schools are higher than those of college graduates, with the exceptions of engineering and social work. Engineering graduates score about the same as law students, or approximately the same as the average for all fields combined of the intermediate and graduate fields. Social work students, on the other hand, score about the same as all fields combined

in the undergraduate group, and fall below college graduates in nursing and engineering. It is possible, of course, that a different result would have appeared had the testing in social work been limited to graduates as it was in law, nursing, and engineering.

We have taken one further comparison from Wolfe. When college graduates are ranked by specialized fields in accordance with their high school grades, it shows that the average engineering student graduated from high school ahead of about 77 percent of high school students who graduated the same year. The average education student had graduated from high school ahead of 70 percent of his class. The average business and commerce student had graduated ahead of nearly 64 percent of his class. These figures can be compared with the median college graduate in all fields combined. His high school grades placed him ahead of 74 percent of his classmates.⁴¹

Although the ranking of the various fields has importance, it is necessary to recognize that the ranges of the fields overlap substantially. Except for psychology, the 50th percentile of every field, graduate or undergraduate, is higher than the 10th percentile of every other field. The conclusion is not that any field totally lacks very able students; rather the data suggest that some fields do not attract enough of them in comparison with the experience of some of the other fields. The National Education Association implies this point with its comment on the quality of education students:

Students of high academic quality are being selected and can be selected for schools of education. There are examples of schools in which students from colleges of education lead all other students in honors conferred. On the other hand, mass testing of college freshmen on a national scale has revealed that average scores for

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freshmen in teacher education are below the average for all freshmen.¹²

Data on quality of students in the various fields are not so obviously valid that they prohibit argument over their significance and meaning. It is difficult, however, to escape the conclusion that some fields suffer from not attracting a sufficient number of intellectually competent students. It is true, also, that students may be selected on other than purely intellectual criteria. Morris Rosenberg has found that social work and teaching rank very high on a "faith in people" index and engineering, law, and architecture rank fairly low,¹³ almost precisely reversing some of the data given above. As Dr. Katherine A. Kendall puts it: "Intellectual attainments may not always be of primary significance in certain professional fields. In social work, for example, it is quite possible that we would turn down a Phi Beta Kappa who did not have qualities of personality which, we think, are necessary in working with troubled people, and accept a B-minus student who had these qualities to a high degree."¹⁴

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CHAPTER 6

Relations Between the Professional School and the University

The antithesis between a technical and a liberal education is fallacious.

—Alfred North Whitehead

GENERAL RELATIONS

THE earliest universities were dominated by professional schools. With the renaissance of the twelfth century, Greek and Egyptian knowledge which flowed into Western Europe "burst the bonds of the cathedral and monastery schools and created the learned professions. . . ." ¹ The University of Salerno, dating from the middle of the eleventh century, was basically a medical school, and the University of Bologna, although a "many-sided institution," was "most noteworthy as the centre of the revival of Roman law." ² Bologna, with its organization of student guilds called "universities," and its organization of professors called "colleges," its academic degrees and its institutional organization, widely influenced the further development of the university. It was not content with remaining a

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professional school of law. "Other subjects appeared in course of time, arts, medicine, and theology, but Bologna was pre-eminently a school of civil law, and as such it became the model of university organization for Italy, Spain, and southern France. . . ." * The University of Paris, by 1231, had established "four faculties, each under a dean: arts, canon law (civil law was forbidden at Paris after 1219), medicine, and theology." * Paris attained its eminence as a school of theology, and became the model for universities later established in Germany and England. The professional school has been a part of the university since its founding. Without the professional school, the medieval as well as the modern university would be changed beyond recognition.

Yet some scholars of higher education, like Abraham Flexner and Robert Hutchins, have considered most professional schools as inimical to the university, diverting it from its main tasks by moving it toward "vocationalism." Their solutions would bar the professional school from the university, or subordinate it to such an extent that the liberal arts would become the dominating force of the university. Instead of restoring a university tradition, these scholars contradict the tradition to which they appeal. In the medieval university, "the course in arts led normally to the master's degree in six years, with the baccalaureate somewhere on the way. Graduation in arts was the common preparation for professional study, being regularly required for theology and usual for intending lawyers and physicians." * The point is, I think, that the professional school and the "arts" faculty each provided parts of the education for the professions.

But there is little need to labor the point that the medieval universities respected and incorporated professional schools. Modern universities do also. Separated professional schools,

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like those in engineering and medicine, tend to move toward the university, and others, like teachers' colleges, founded for the limited purposes of a single profession, discover that they must assume the character of colleges in order to do their professional job adequately. They change from teachers' colleges to "state colleges," and become similar in organization if not in emphasis to other four-year colleges.

Although the university has an unbroken affinity for the professional school since the earliest times, Dr. Charles Frankel, professor of philosophy at Columbia University, points out that "it would be unduly soothing to suggest that professional schools and the non-professional divisions of American universities have been easy bed-fellows. . . . Recurrent grievances, a sort of chronic tension, and a sense of unfulfilled possibilities have been built into the relationship of many professional schools to the universities with which they are ostensibly associated."¹ Frankel finds an explanation of this "state of affairs" in the "imperious pressure of vocationalism" and the attitudes of some professions "that they have a special body of knowledge or *expertise* which renders them unique." These tend to establish "a professional gospel, a creed which teaches the indispensability of the profession and its special skills for the achievement of all things that are good," and sometimes to succumb to "special pressure to train students quickly and directly for practice." He suggests, on the other hand, that some of the difficulty is caused by university departments dominated by the "genteel" tradition which, he believes, "has been the unspoken rationale for the policy under which so many American institutions of higher learning have quarantined themselves against seriousness."² Conflict between these two equally undesirable sets of attitudes creates tensions and frustrations on both sides.

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Although the relationship may be uneasy, it can hardly be ignored. In most universities, the budgets of the professional schools form a substantial part of the total budget of the university. Professional education attracts the majority of students and requires the majority of the faculty. Laboratory and field study require special facilities either on or off the campus. In short, professional schools require time and money from the university. Their students also require services from the faculties in the arts and sciences, particularly in the undergraduate fields. A university without professional schools could be conceived, but it is unlikely that it could be operated. The relationships that have been established therefore warrant further definition.

ADMINISTRATIVE STRUCTURE

Of the ten professions we have been considering, only clinical psychology has avoided the status of a school or college within the university. Clinical psychology is almost uniformly organized as part of the graduate department of psychology, and never as an autonomous professional school. Among and within the other nine professions, there is variation. Some have independent schools devoted solely or mainly to the task of educating students in their professions. In social work and veterinary medicine, all schools are located within universities or colleges.

Independent Professional Schools

Seven of the professions have some schools which are independent of colleges and universities. For architecture and nursing each, only two schools that are not parts of colleges or universities give bachelor's degrees. Of the 126 approved law schools, 6 are independent. Eleven out of 78 medical schools

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are independent institutions. Engineering has 35 independent schools out of its total of 210. Business has a number of independent schools. About 1200 colleges and universities provide teacher education, and of these, only about 125 are teachers' colleges. This number is declining as teachers' colleges are reorganized into four-year colleges of greater scope. Independent schools have the complicated task of organizing the professional sequences which their curricula require, and of building sufficient strength in the basic sciences and humanities to support professional study. When they are successful in doing so, they approach the status of universities themselves, as, for example, the Massachusetts Institute of Technology and the major land-grant colleges.

In Colleges and Universities

The professional school may be established as part of the university structure in several ways, depending in some measure on the way the university itself is organized. Its place in the university ranges from that of a unit whose dean is directly responsible to the central administration of the university to a specialization within a department of the university. In between lie at least two other forms of organization—the semi-autonomous variation of the autonomous school, and the department within a larger division of the university.

Autonomous:—The autonomous professional school is not as self-directing as the independent professional school. It is subject to university-wide policy and control. Its autonomy rests on the fact that its administrative officer is directly responsible to the central administration of the university, usually to the president or the vice president. Most professions prefer this place for their schools, believing that it gives status and freedom, and thereby aids the schools in achieving their mission.

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For example, Deitrick and Benson say, "The study of the administration of medical schools has led the Survey to the opinion that, in those institutions which are primarily educational institutions in which training and service are definitely minor activities, the dean should be the administrative head of the institution reporting directly to the president or to the board of trustees when there is no university connection." *

Semi-autonomous:—The semi-autonomous professional school has many of the organizational characteristics of the autonomous school, but its place in the organization structure of the university is different. It is administratively related to a small number of similar schools, since its dean is responsible not to the president or vice-president but to an administrative officer to whom deans of the other similar schools are also responsible. To use medicine as an example again, the complexity of education for the health professions has grown to such an extent that presidents have required assistance in coordinating, financing, and administering the schools focused on these professions. In several universities, therefore, the medical school has become one of a group of schools, such as dentistry, nursing, and pharmacy, in which the dean of each school is responsible to a single officer, who may be known as provost, vice-president for health affairs, director of medical affairs, or other title which reflects both the breadth of his responsibilities and their limitation to a group of schools.

Departmental:—Some professional schools hold departmental status, falling within the responsibilities of the dean of the college of arts and sciences, or of some other college within the university. The nursing school, in some institutions, is a department in the medical school. In others, it is a department within the college of arts and sciences. When so located, it is farther from the center of decision and usually has less influ-

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ence in the university councils than a more nearly autonomous position would give it.

Unit:—Except for clinical psychology, all professional schools have at least the status of departments. Clinical psychology has rarely been separated from the graduate department of psychology. Psychology departments are accredited for educating clinical psychologists, but the curriculum is part of the total effort of the department.

Status of schools in different professions:—Schools for the older professions have more often been awarded "autonomous" status than schools in professions recently recognized by university education. All veterinary schools except two carry the title of "school" or "college." Every medical school carries one or the other of the titles, except the two Medical Centers of the State University of New York. Engineering schools have similar places within the university structure. Architecture and nursing have not moved quite so far toward autonomy. Of the 45 accredited schools of architecture located in universities in 1953, 5 were "autonomous," 8 were semi-autonomous, and 35 were departments. According to Taylor, "In the past there were a larger number of departments of architecture in colleges of engineering and institutes of technology than at present; the trend is toward organizing the instruction in autonomous or semi-autonomous schools."¹⁰ Of the 114 collegiate schools of nursing, 45 are separate professional schools, 15 are departments in medical schools, and 45 are departments of colleges of science, liberal arts, education, or medical science.¹¹ Five schools did not report. The trend is toward the autonomous or semi-autonomous school of nursing.

Law schools customarily have the status of an autonomous school or college. Membership in the American Association of Collegiate Schools of Business is open only to a school or col-

lege which is "a distinct and independent degree recommending unit responsible directly to the central administrative authority of an institution of higher learning to which other independent degree recommending units are similarly responsible."¹³ Schools without this amount of independence may be recommended for associate membership if they meet other requirements. All members of the Association, however, have the title of "school" or "college." Most schools of social work have the status of schools, but a few are graduate departments.

In teacher education, because of its size and varied origins, the situation is considerably more complex. According to Armstrong, "only about 125 of the 1200 colleges and universities that prepare teachers are teachers colleges, and only 75 additional institutions list teacher education as their major purpose."¹⁴ Public and private colleges and universities educate the bulk of teachers. Armstrong finds that three patterns of organization exist for teacher education in the university: 1) "the college or school of education has full responsibility for the students and their educational programs.... 2) The college or school of education has full responsibility for some students preparing to teach, beginning with the freshman year, and for some beginning with the junior year. For others, the college or school shares responsibility with other colleges and schools on the campus.... 3) The unit specifically concerned with teacher education is generally a department within a college or school, usually within the school of arts and sciences. The major responsibility of the department of education in this type of organization is to offer professional courses in psychology, sociology, philosophy, and methods as desired by the faculty of the school of arts and sciences."¹⁴

The push of the professional school is toward autonomy, or

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at least toward the semi-autonomy of being grouped with like schools under a special administrative officer comparable to a vice-president. Autonomy gives a school control of its curriculum and its students, status in the university, and influence on university policy. Autonomy makes a school visible to the public as well as to its profession. These are values which all professional education desires.

It is clear, however, that becoming autonomous does not solve all problems for the professional school, particularly when the movement of professional education is in the direction of knowledge and away from skills. As the base of professional education expands with the addition of more and more knowledge, professional education becomes more and more dependent on other parts of the university for providing its students with mastery of the arts and sciences underlying practice. A professional school may successfully achieve the advantages of autonomy only to discover that it has also won the disadvantages of isolation. It must then find ways of retaining autonomy while effectively relating itself to the rest of the university, at least to those parts of the university which are necessary to its work. Otherwise, the purposes which first impelled the professional school toward the university will have been lost in its drive for autonomy.

Educators in the professions recognize the disadvantages of isolation. For example, Arnold B. Grobman has written about medical schools:

The present university association . . . is in most instances little more than nominal. Many contemporary medical educators now agree that the time is here for medical schools to be made integral parts of universities rather than to continue as semi-autonomous units only loosely associated with universities. Even now, many medical schools are moving, and in some cases returning some

teaching activities from large cities back to the main university campus . . .¹⁵

In nursing, a study of the nursing curriculum at the University of Washington reports that some of the effort to reduce isolation is coming from other parts of the university. It says:

Several of the faculty members in the basic sciences have expressed a desire to meet with one another as well as with the nursing faculty, to determine where unnecessary overlapping may occur, and to find opportunities to build upon the concepts stressed by their colleagues.¹⁶

Law schools have also been aware of their isolation. Because of age and prestige, the law schools have often had a high degree of autonomy. But autonomy is not enough, and integration with the rest of the university is difficult to manage. "For about twenty years now, American professors of law have been agreeing with one another that we ought to do something about the integration of law with the other social sciences. In view of this general agreement, it is remarkable how little of real significance has actually been accomplished in this direction."¹⁷ Studies of professional education in other fields, like engineering, business administration, and architecture, echo the hope that isolation will be replaced by integration, so that the contributions of the various fields of knowledge can be made part of the understanding of the professional student.

ATTITUDES OF PROFESSIONAL SCHOOLS

Although the professional schools recognize the need for the basic sciences and humanities, they often sharply criticize the results of efforts of the other parts of the university. These criticisms include two major complaints: 1) the university departments do not do a competent job in what they set out to do,

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and 2) the university departments are unwilling to do the jobs that professional students need.

The professional school must depend on departments of the university to develop part of the competences required by the professions. The school believes, rightly or wrongly, that other departments should be successful in teaching students the subject-matter or skills they are responsible for. When the professional school discovers that students have not mastered what the departments give, the professional school is frustrated, and may attempt to solve the problem by escape into further isolation. It establishes under its own control courses which would be more appropriately provided in other departments or schools.

The most common complaint of the professional schools is that even after students devote parts of two years or more to study with the English department in writing, speech, and literature, they cannot either write or speak in logical, clear, and convincing English. The professional schools do not think that the difficulties of this task are insuperable, and they therefore look with considerable dissatisfaction when they compare the results with the effort expended. Engineering educators summarized their frustrations in *General Education in Engineering*:

From all parts of the country came the now standard complaint that students could not read or write adequately, and could not express themselves orally with either clarity or precision . . .

The most disturbing factor in this whole "English problem" is the staggering discrepancy between effort and results. Students normally begin their schooling with a reasonable command of the English language, acquired primarily from the home. They then study English in one form or another continuously throughout the elementary and secondary grades, or for a total of twelve years. Yet it is a commonplace that colleges regard this preparation as inadequate, and the freshman English course is the closest thing we have to a uni-

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to the home and the school, has fallen on the English departments of the colleges.²¹

Students in engineering, law, and medicine are among the most intellectually qualified of all students in the university. Whatever the cause of their deficiencies in English, it is not lack of ability. English departments are not unaware of these problems. Some are making serious efforts to solve them. Members of English faculties have been working toward solutions for several years through a committee of the National Council of Teachers of English which has been constructing an effective program for the "non-major" student who does not expect to specialize in the field of English.

Deficiencies in oral and written expression illustrate the fact that departments of the university do not always perform their tasks with success, even when willing and anxious to do so. In addition, some professional schools have the conviction that departments are not interested in teaching their subjects in a manner that would be useful to professional students. Instead, the professional schools believe, these departments are interested in and concerned with only those students who may be expected to "major" in their fields. If instruction focused on these students has meaning for students in professional fields, the departments are pleased. If it does not, the departments are unconcerned. In other words, the departments ask that professional students adapt themselves to the instruction designed for students who are majoring in the field; it cannot be modified for the purposes of other students.

Reactions of several professional schools illustrate their conclusions. Architecture faculties are particularly unhappy with the teaching of physics and mathematics. In physics, as we have seen, they judge that "Here, particularly, the design of

courses primarily to please the ego of the instructor or to cater to the needs of students intending to major in the fields seems to be at its worst;"²² in mathematics, they ask somewhat hopelessly that the mathematics departments formulate courses "tailored to the needs of architectural students."²³ Some engineering schools have abandoned hope of obtaining what their students need from departments of the university, and "have established their own humanistic-social departments, or their own departments of English, or use other less radical devices for getting the kind of instruction they seek for their students. The evidence from this study is that when this is done the results are gratifying, at least to the school of engineering."²⁴ Medical educators are distressed by the teaching of physics, not only because "much physics teaching is downright poor," but because they suspect that physics teachers take pride in being obscure. Physics courses, they find, repel premedical students not because physics "is difficult but because it is unnecessarily difficult. Many of them believe (as do some faculty members) that physics teachers try to make the general course 'hard and mysterious.'"²⁵ Business schools also have difficulties. I know of one dean of a business school who eliminated Spanish as a requirement for business majors, since he despaired of persuading the Spanish faculty that the needs of business students were as legitimate as those of language majors.

These illustrations partially explain why the relations between professional schools and university departments are in a state of "chronic tension." Some professional schools suggest solutions which would relieve the tension by almost eliminating the relationship. Architecture strongly urges that its schools work toward eliminating the difficulties by grouping architectural students into their own sections, to be taught either by faculty members of the departments or by faculty members

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established for the purpose in the architectural schools. *The Architect at Mid-Century* suggests that architecture schools organize science instruction in one of two ways: either incorporate the material needed in courses already taught in the architecture school, or "introduce a special course, perhaps entitled *Science for Architecture*, to be administered and taught by the school of architecture."²⁶ Either choice would avoid depending on the university departments. The study is convinced that

. . . special treatment for special groups is the only defensible policy. Where the need is demonstrable, the professional school should be able to depend on the support of the general university administration in implementing this policy. In many institutions, this is accepted practice and there is no barrier to interdepartmental collaboration. In some, however, the divisions serving professional students pretend omniscience in what these students should be taught. In such cases, direct appeal should be made to higher authority.²⁷

If the recommendations of *The Architect at Mid-Century* are adopted, architecture schools will teach freshman English, physics, and chemistry for architecture students. In mathematics, architecture students "will be handled in special sections, and . . . special problems couched in terms of building situations will be provided."²⁸

Engineering views departments of the university with somewhat less rancor than architecture does. It has not had the severe difficulty of architecture with courses in mathematics, physics, and chemistry, and its solutions are pointed more toward the social sciences and humanities. It believes that "captive departments" of the humanities and social sciences in the engineering schools are undesirable, but it recognizes that they may be necessary under certain unusual conditions. It

regards "the establishment in the school of engineering of separate departments for teaching the humanities and social sciences to engineering students as a device of the last resort, to be adopted only as a solution to extreme local conditions."²² Instead of proposing a radical solution of special courses for engineers in the humanities and social sciences, engineering suggests a long-range solution. "It is to join forces with other professional and pre-professional groups on the campus whose problems are at least roughly comparable to that of the engineering schools.... Administrations that would understandably shrink from the prospect of special courses and special programs for every special group, will find it more reasonable to visualize a single general education program designed . . . for all professional and pre-professional groups."²³

If these comments accurately represent the beliefs of professional schools, it is clear that relations between them and the departments of the university are not satisfactory. Fortunately, the professional schools and the departments both place a high value on instruction in the basic sciences and humanities, or conflict might well be irreconcilable. Instead, conflict arises from secondary issues, requiring decisions on what parts of the sciences and humanities are necessary and desirable for professional students, whether the focus and quality of instruction are appropriate to their purposes, and who should teach the subjects. These issues are susceptible to resolution, if—and it is sometimes a large if—the professional schools and the university departments are willing to work together toward a resolution. Engineering has accumulated evidence that the arts and engineering faculties can resolve conflicts when they come together to work out their differences. Its Committee on the Humanistic-Social Research Project concluded:

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... the formulation of objectives must be carried out jointly by the engineering and arts faculties. Neither group, acting independently, is likely to define the task in a way that will win the prompt and understanding approval of the other, and our field reports are unanimous in pointing out that such mutual approval is indispensable to a successful program. We believe that the lack of a jointly formulated philosophy is the basic cause of the misunderstanding and inefficiency that was found on many campuses.

... we have evidence that conflict disappears almost completely on those campuses where the arts and engineering faculties are thrown together as colleagues on an equal footing, and where there are systematic procedures for bringing the two groups together to work out their mutual problems.*¹

These illustrations and comments give some assurance that the professional school can retain its autonomy without immersion into isolation if the university departments and the professional school make conscious, consistent, and intelligent efforts to relate themselves to each other. This desirable end cannot be achieved without effort. It will not automatically occur. It cannot be gained through sniping or depreciation. Together, the professional schools and the departments of the university can build on the foundation of their common belief that the basic sciences and humanities are essential to the education of the professional man. By joint effort, they can translate this common belief into mutually agreeable decisions and procedures on curriculum and instruction.

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27. *Ibid.*, p. 184.
28. *Ibid.*, p. 181.
29. ASEE. *General Education in Engineering*, *op. cit.*, p. 28.
30. *Ibid.*, pp. 29-30.
31. *Ibid.*, pp. 2-3.

CHAPTER 7

Accrediting

The way in which a university should function in the preparation for an intellectual career, such as modern business or one of the older professions, is by promoting the imaginative consideration of the various general principles underlying that career.

—Alfred North Whitehead

WHEN a college or university awards a degree, it is employing a symbol behind which stands the successful completion of the institution's requirements. The degree is intended to represent a level of educational accomplishment or an amount of competence which the university guarantees that the graduate has achieved. Since the United States has never established the device of "external" examinations, the university gives its own examinations to its own students and awards its degree without further test by anyone. Its degree, therefore, has only the value which the university gives it. Unless the university awards the degree only to those who have in fact achieved a recognized level of competence, the symbol of the degree loses its contact with reality and becomes a fraud.

To be sure, society has established additional tests for persons entering certain professions. In a number of fields, including architecture, medicine, law, nursing, veterinary medicine, and in some states, clinical psychology, graduates must successfully undergo examinations for licensing before being permitted to enter practice. Teachers must be "certified," but this does not require examination. Engineers may obtain a license if they wish to take examinations, but they can practice without it. Licensing is designed to protect the public from incompetent practitioners. It may protect the professions from admitting incompetent persons. But it does not protect the student from the incompetent university. Without other means of judging the quality of institutions, only the integrity and intelligence of the universities could do that.

Unfortunately, not all institutions have sufficient integrity to maintain the quality of their degrees. Today, the situation is vastly different from that of fifty years ago, when Abraham Flexner could write that the catalog of one so-called medical school was a "tissue of misrepresentations from cover to cover." But stories of degrees for sale appear frequently enough even now to make it clear that a degree is a symbol only. Its value rests on what it represents.

Universities in the United States are largely autonomous, operating under the control of their own boards of trustees, even though chartered by the state. The state itself exercises little control over them, except for public universities under a central coordinating board. After awarding charters, the state exercises virtually no control over private universities, beyond the most general kind of concern.

Three groups need to assure themselves that universities meet a standard of performance which gives value to their

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degrees—students, professions, and society. This protection can be found through some kind of external review which recognizes merit and exposes fraud. By applying sets of standards which can be met only through acceptable performance, the review can uphold the value of the degree awarded, so that it will have understandable meaning and significance. If all universities are found to meet minimum standards, students can choose among them with assurance of satisfactory instruction.

It would be possible, of course, for the state to review the performance of all institutions, and to publish lists of those which met its standards—in other words, to accredit the colleges and universities within its borders. To do so would be to give the state greater control over colleges and universities than the United States has been willing to allow. Furthermore, state-by-state accrediting would have the difficulty of standards which varied from one state to the other. Once the difficulties of these variations became clear to the public, there would probably be calls for accrediting by the national government to correct the variations in standards. A nationalized system of higher education could conceivably result.

Need for accrediting, during the last part of the 19th and the early years of the 20th century, was obvious. Unless the colleges and the universities had found a way to establish accrediting, it is quite possible that governmental accrediting would have spread. Instead, the institutions and the professions themselves accepted responsibility for reviewing the quality of higher education. They recognized that it would be necessary to apply sanctions against colleges and universities which were rankly incompetent or secretly dishonest to protect the unsuspecting student, the professions, and society, as well as to preserve the reputations of the competent institutions.

What the colleges and universities did was to band together to define and apply the sanctions themselves to gain protection both from the possibility of governmental controls which society might otherwise require, and from effects of institutions which were so flagrantly inadequate that they exploited students and society by their pretense of being universities. By so doing, the universities could give understandable meaning to the symbol of the degree. They could retain their autonomy by maintaining quality and by taking upon themselves to expose incompetence and fraud wherever it appeared among institutions of higher education.

Considerations like these brought colleges and universities to undertake the task of accrediting. Colleges and universities formed regional associations, "regional" to avoid the narrowness of the state but to avoid the extreme diversity of the nation, and "association" to give strength to their judgments. In effect, the regional associations served as a means by which educational institutions might accredit each other, establishing standards to which all could agree and which were outside the reach of governmental influence.

Accrediting by regional associations did a great deal to raise the quality of instruction in colleges and universities. But it could not solve the problem of the professional schools. Typically, the regional associations accredit the college as a whole. They do not accredit parts of it. A university might be accredited, therefore, if its general quality meets the standards, even though parts of it are seriously inadequate. Since the regional associations do not accredit the professional schools, their accreditation might actually mislead students into selecting a poor professional school in an accredited university because they mistakenly assumed that it too had received ap-

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proval. Also, many professional schools were located outside of colleges and universities, and were often not subject to accreditation by the regional associations at all. Some method had to be found which would bring them under review also.

Again, non-governmental bodies undertook the task. Led by the American Medical Association which began accrediting in 1905, the professions themselves established procedures for accrediting the professional schools to supplement institution-wide accrediting done by the regional associations. Today, almost all professional schools are subject to accrediting by some agency of the professions. In some professions, like engineering, the accrediting agency goes so far as to accredit even the specialized curricula within the professional school, being unwilling to make a blanket approval of the whole school unless all its parts are satisfactory.

The American Medical Association, spurred by Flexner's study and stimulated by the massive funds which foundations injected into medical education, was phenomenally successful in its use of accrediting. Its success attracted followers, and one by one, the other professions set up their own procedures, conducted their own reviews, and published their own lists of approved schools. For the professional schools which were not parts of universities and were therefore one-purpose institutions, this multiplication of accrediting agencies caused no great difficulty. But for the universities with a number of professional schools, it often became an administrative nightmare.

For the university found itself in the unenviable position of trying to serve as many masters as there were accrediting agencies, and at its own expense. Different professions would ask for different information at different times, and would sometimes even establish conflicting standards. At times, standards

established by the professions would conflict with the university's need for balanced development. Sharply defined, quantitative standards reduced the university's area of decision by making the professional school subject to external judgments which sometimes invaded the administrative prerogatives of its officers and the legal authority of its boards of trustees.

No wonder, then, that the universities attempted to break free from accrediting by the professions. Through the National Commission on Accrediting and earlier organizations, they first tried to eliminate or greatly reduce the amount of accrediting conducted by the professions. When they found that to be impossible, they began working toward a more reasonable method of continuing it. This, they found in joint efforts among the regional associations and the professions. The commission's methods will be described later, after a look at how the professions themselves operate in accrediting. Because of the National Commission, the situation is changing. But the bulk of accrediting of professional schools continues to be conducted by each profession separately.

Each of the ten professions has organized methods and agencies for accrediting. It is possible to compare their efforts by describing, first, the kinds of agencies they have established to accredit professional schools; second, the ways in which these agencies operate; and, finally, the kind of standards they employ as bases of their judgments.

ACCREDITING AGENCIES

Each of the ten professions has established agencies for the accrediting of professional schools. These fall into three general types: professional associations of practitioners, associations of professional schools, and joint councils on which both practi-

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tioners and schools are represented. In summary, accrediting agencies for the ten professions distribute themselves as follows:

<i>Professional Associations</i>	<i>Professional Schools</i>	<i>Joint Councils</i>
*Law	*Law	Architecture
*Medicine	*Medicine	Engineering
Psychology	Business administration	Nursing
Veterinary medicine		Social work
		Teaching

In general, the professions have tended to move away from use of associations of schools as the accrediting agencies. Nursing, social work, and teaching in recent years were all accredited by associations of schools.* In 1952, however, social work established the Council on Social Work Education which undertook accrediting, and teaching followed in 1954 with the National Council for Accreditation of Teacher Education. In 1952 also, nursing established the Accrediting Service of the National League for Nursing, which corresponds roughly to the council form, since the League includes in its membership both practitioners and educators.

Professional Associations

In clinical psychology and veterinary medicine, the professional associations conduct the process of accreditation alone. Since 1948, the Committee on Evaluation of the American Psychological Association has accredited the clinical psychology programs of graduate departments of psychology. It accredits only clinical psychology and counseling psychology, but since both are closely related to experimental psychology, rep-

* Law accredits both through the Association of American Law Schools and the American Bar Association; medicine through the Association of American Medical Colleges and the American Medical Association.

representatives of the clinical counseling and experimental fields serve on the eight-man committee. Veterinary medicine in 1946 established the Council on Education of the American Veterinary Medical Association to strengthen accrediting which it had begun in the 1930's.

In law and medicine, the professional association and the association of schools merge their interests to some extent, although the professional association predominates. The American Bar Association "approves" law schools through its Council on Legal Education and Admissions to the Bar, which has been functioning in this field since 1923. An "approved" school does not necessarily belong to the Association of American Law Schools, but standards are similar, and five-sixths of the "approved" schools are members. Through its Council on Medical Education and Hospitals, the American Medical Association collaborates closely with the Association of American Medical Colleges. All members of the AAMC are accredited by the American Medical Association, and *vice versa*.

Professional Schools

The American Association of Collegiate Schools of Business (AACSB) was organized in 1916, but accreditation was not part of its original intent. Over the years, however, it established standards for admission, and these have tended to become accrediting standards. A Standards Committee prepares and reviews standards for admission, but the Executive Committee recommends new admissions to the membership, which must approve by a two-thirds vote.

Joint Councils

Architecture, engineering, nursing, social work, and teaching use joint councils as their accrediting agencies. The coun-

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cils are variously composed but include representatives of the schools and of the practitioners, together with other persons interested in the field. The National Architectural Accrediting Board is composed of two representatives each of the American Institute of Architects, the Association of Collegiate Schools of Architecture, and the National Council of Architectural Registration Boards. It was formed in 1940. Its members are designated by their organizations. The Engineers' Council for Professional Development (1932) is composed of three representatives from each of eight professional groups, of which six are groups of practitioners—the American Society of Civil Engineers, the American Institutes of Mining Engineers and of Metallurgical Engineers, the American Society of Mechanical Engineers, the American Institute of Electrical Engineers, and the American Institute of Chemical Engineers. To these groups of practitioners are added the American Society for Engineering Education, and the National Council of State Boards of Engineering Examiners. The ECPD accredits upon recommendation of the Committee on Education.

Since 1952, accrediting of nursing schools has been conducted by the Accrediting Service of the National League for Nursing. Since the NLN includes practitioners, educators, and lay persons, it parallels the council form of accrediting.

Also since 1952, accrediting for social work schools has been centralized in the Council on Social Work Education, composed of social work practitioners selected through their national organizations, employing agencies, undergraduate social work departments and graduate schools of social work, and lay persons interested in social work education. It operates through a Commission on Accreditation which is a 15 member body made up of 9 faculty members of graduate schools of social work, 3 members of the National Association of Social

Workers, and 3 members-at-large, one of whom is usually drawn from the general field of higher education.

The most recent of the councils, the National Council for Accreditation of Teacher Education, was formed in 1954. It is composed of 19 members: 7 selected by the American Association of Colleges for Teacher Education; 1 by the Council of Chief State School Officers; 1 by the National Association of State Directors of Teacher Education and Certification; 6 appointed by the National Commission on Teacher Education and Professional Standards of the National Education Association (NEA); 1 by the National School Boards Association; and 3 by an *ad hoc* committee designated by the National Commission on Accrediting.

Comments

Some observers have suggested that accrediting by practitioners often supports higher standards than accrediting by schools, since the schools tend to protect the weaker institutions for which lower standards mean enrollments high enough to permit survival. On the other hand, accrediting by practitioners may establish artificial standards and may place emphasis on immediate and narrow competence rather than broad understanding of the principles underlying professional work.* The movement of the professions toward the council type of accrediting agency with its combination of practitioner and educator attempts to resolve the contrary forces upon an appropriate middle ground.

STANDARDS

Accrediting agencies which the professions establish judge whether the educational program of a professional school will qualify students for entrance into the profession. To make this

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judgment, the accrediting agencies must establish standards which define the minimum program likely to achieve this purpose. These standards vary from profession to profession, but they can be compared in at least two ways: 1) by the areas in which the accrediting agency judges the schools, and 2) by the relative emphasis on objective measures or subjective judgments. We shall consider these in order.

Areas of Accrediting

In general, all professions in accrediting schools are concerned with organization, aims, curriculum, faculty, students, facilities, and financing. Many require that the professional school have equal autonomy with other professional schools in the university, and most imply that they would prefer autonomy whether other professional schools have it or not. For business administration, autonomy is almost an absolute requirement, for the American Association of Collegiate Schools of Business does not admit schools which lack autonomy even to associate membership. Engineering, law, medicine, social work, and veterinary medicine place considerable emphasis on autonomy. Architecture, nursing, and teaching place somewhat less, since a number of their schools are departments. Clinical psychology, as we have seen, reverses this drive, requiring that the program be part of a graduate department of psychology.

Aims:—Most sets of standards include one on aims of professional education in the field. The standards for business administration do not. Where present, the standard on aims is usually worded in very general terms. Social work, for example, says "The school seeking accreditation must have in writing a statement of its educational and research goals which embody the recognized educational goals of the profession."¹ The remainder of the section states the areas in which the schools

should have objectives, but it does not attempt to define what they should be, other than that they should "embody the recognized education goals of the profession." Standards of other professions are equally general in their statements of aims.

Curricula:—Standards for curricula prescribe length more frequently than content. Without exception, those professions which publish standards state the minimum numbers of academic years, semesters, quarters, or hours which are needed. On content, however, the standards tend to be more general, sometimes indicating necessary areas, such as general education and specialized professional training, with business administration going so far as to include specific proportions in its standards. Business also names courses which are needed, but other professions are content to name areas only.

Faculty:—Qualifications of faculty and faculty-student ratios are defined by standards of a number of the professions. Law, architecture, and engineering set no exact standard for degrees to be held by faculty members. Social work asks that "all members of the social work teaching staff should have appropriate social work education as evidenced by professional graduate degrees,"⁵ and business administration standards state that "It is expected that at least 50 per cent of the teaching credit hours on either the Junior-Senior level or on an overall basis will be taught by full-time faculty members having terminal degrees . . .".⁶

In several of the professional fields, the standard for faculty-student ratios is stated with precision. The Association of American Law Schools requires a minimum of one teacher for each 75 students or major fraction thereof, hardly a stringent requirement. The Council on Medical Education recommends one full-time instructor for each 25 students in the basic medical sciences. The American Psychological Association suggests

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one to twelve as a desirable maximum ratio, while the National Council for Accreditation of Teacher Education has adopted a general standard that "An institution should provide a faculty for professional education adequate in number as well as in quality."⁷ Business administration, although fairly precise in other standards, avoids establishing a ratio of faculty to students by stating that "the number of teachers . . . shall be adequate to provide effective instruction at all levels offered."⁸ Social work has an equally general provision.

Admissions:—Standards of most of the professions require that admission of students shall be selective, and that unqualified applicants be excluded. The Standards of the American Bar Association prescribe only that students shall have completed "at least three years of acceptable college work" before admission to law school. The standards for business administration make no mention of students. The National Council for Accreditation of Teacher Education follows standards that require the colleges to have policies of selective admission, although it does not attempt to specify the criteria which such policies should contain. Social work goes a little further in stating that "Conditions of admission will include careful screening of prospective students to select those who are intelligent, healthy, emotionally stable, and whose previous preparation qualify them to go on to graduate professional study."⁹ The "Essentials of an Acceptable Medical School," prepared by the Council on Medical Education, establishes standards for admission and methods of selection of medical students, defining desirable admission policies and practices somewhat more precisely than other professions do.

Facilities:—All professions are concerned that the facilities of the schools be sufficient for their programs. Accrediting in architecture, engineering, law, medicine, social work, teaching,

and veterinary medicine shows a special concern with the size and quality of libraries. Standards of the American Bar Association require the law school to "provide an adequate library available for the use of the students," and the Council on Legal Education has interpreted this to mean a minimum of "7500 well-selected, usable volumes" with this requirement to be doubled by the fall of 1963.¹⁰ The standards used by the Council on Medical Education require certain categories of material, such as reference books, catalogs, indexes, and current medical periodicals.

Other professions specify facilities needed in their programs as either desirable or essential. Teaching wants to make sure of laboratory school facilities, either on or off the campus. Medicine, nursing, and veterinary medicine want adequate laboratories and clinical material. Social work and business administration speak in fairly general terms of the requirement for "adequate" classrooms, laboratories, and libraries.

Finances:—Although no standards state the minimum amount of money a professional school must be able to command each year, all the professions expect the financing to be "adequate" to the programs and purposes of the school. The ABA specifies that a law school "shall not be operated as a commercial enterprise and the compensation of any officer or member of its teaching staff shall not depend on the number of students or on the fees received."

Objective Measures or Subjective Judgments

Most professions have shied away from defining objective measures for their standards of accreditation, believing that it is more important to define areas for judgment. They recognize that effective teaching and significant study and research can occur under a wide variety of conditions. These professions are

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concerned with quality of instruction, to be sure, but they wish to avoid the danger that accrediting can prescribe uniformity rather than quality. They are aware of how little certainty there is that a particular faculty-student ratio, or area of classroom space per student, or number of books in the library, or faculty load guarantees effective instruction. Social work states that "The *Manual* . . . places major emphasis on qualitative, not quantitative standards, and on the achievement of high standards rather than the standardization of educational programs."¹¹ Architecture has been so hostile to the idea of establishing objective measures as standards that the charter of the National Architectural Accrediting Board prohibits it from taking any actions that will "create conditions or have conditions created that will tend toward standardization of educational philosophies or practices," and directs the NAAB to publish the list of accredited schools only, without publishing the standards or procedures by which it reaches its judgments. Actually, the NAAB has circumvented this prohibition to some extent by drawing from its knowledge of conditions and practices at superior schools a list of what it calls "significant criteria." These are not standards, however, but are areas in which the school is to be judged.

Engineering, also, avoids objective measures. Although the Engineers' Council for Professional Development has been attacked for its failure to establish quantitative standards, it is convinced that "the combined judgment of several highly respected leaders of the profession can appraise the essential educational experience provided by an institution far better than the most complete and complex types of scoring."¹² The Standards of the American Bar Association contain only nine paragraphs. These specify that students cannot be admitted to law school without at least three years of undergraduate work,

and that the length of the law course shall be three years. Beyond these, however, the standards require an "adequate" library, "a sufficient number" of teachers, "reasonably adequate facilities," and "a sound educational policy." None of these latter requirements can be applied without judgment. To be sure, the Council on Legal Education has interpreted these standards into some objective measures, but the flavor of the standards is that of judgment rather than measurement.

Teaching, nursing, and psychology, in large measure, exhibit a similar concern that accrediting be based on qualitative rather than quantitative standards.

Business administration and veterinary medicine seem to stand apart from this general agreement. Business specifies the proportion of hours that must be taken in business and economic subjects, the fields in which basic instruction must be provided, the proportion of credit hours that must be taught by faculty members holding terminal degrees, the minimum number of faculty members, and the number of hours a faculty member may teach—all within six paragraphs of its 14 sections of standards. Veterinary medicine, also, uses a number of precise measures. It requires that at least 8 teachers should be in the preclinical sciences, and that the clinical staff should include "not less than 8 faculty members of which at least four should have professorial rank." The school must maintain a library and a museum. It must have a hospital and an ambulatory clinic. Clinical "accessions should be at least 2,000 a year." The curriculum must consist of not less than "4,000 clock hours of classroom, laboratory and clinical instruction."¹¹

The professions which apply detailed and precise standards are clearly a minority. Medicine's success in accrediting did much to influence the other professions to undertake similar efforts. It established fairly specific requirements. It has found,

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however, that the task of policing and exposing inadequate schools is becoming less important as the general quality of professional education has risen. It, too, is revising its standards to encourage experimentation and to lean on the judgment of quality. The AMA's Council on Medical Education and Hospitals says:

By periodically restating its standard of an acceptable medical school in increasingly broad and general terms, the Council has sought to encourage institutional responsibility in the maintenance and further development of education programs of high quality, with each medical college having a maximum of freedom in experimenting with its own program.¹⁴

Accrediting of professional schools thus is moving away from use of the detailed requirements whose validity had never been tested and whose application was often resisted by the universities in which the schools were located. As it does, accrediting becomes more nearly consultation than a ceremony of consecration or condemnation. In fact, the Council on Social Work Education has established the function of consultation as part of its program. Upon request, the Council supplies schools with the help of consultants who analyze programs and recommend improvements, entirely apart from accrediting. The Education and Training Board of the American Psychological Association also provides consultation upon request. Perhaps in the future, accrediting will take on more and more of the form of expert advice rather than external measurement.

PROCEDURES OF ACCREDITING

Accrediting agencies in the different professions use similar procedures for the appraisals on which judgments of the schools will rest. Usually, the procedure begins when a school applies

for accrediting. The agency first asks for a written report, sometimes in the form of questionnaire, as in engineering, clinical psychology, and architecture, for example. The amount of information requested varies tremendously from profession to profession, in some requiring only a few pages, in others a good-sized book.

Although the Council on Social Work Education may reject the application at this point, most professions do not reach any judgment until after a "team" of investigators has visited the school. No profession reaches a favorable judgment without such a visit.

The "team" is crucial in the accrediting process, since its judgments are usually accepted by the bodies to which it reports. It ranges in size from one member, which is the minimum for law, to four members, which is customary for medicine. Nursing, psychology, and social work usually employ teams of two members. Agencies try to organize teams that represent different interests. In architecture, for instance, the three-man team is composed of one practitioner, one teacher, and one member of a registration board. One of these members must be drawn from the National Architectural Accrediting Board itself. In psychology, the two members are drawn from the Committee on Evaluation of the American Psychological Association, or one from the Committee with one specially selected visitor. Medicine joins two representatives of the AMA with two representatives of the Association of American Medical Colleges. Veterinary medicine makes sure that the two major aspects of veterinary medical education are represented by designating the Executive Committee of its Council on Education as the visiting team. The Committee is composed of two faculty members, one pre-clinical and one clinical, and a practitioner.

The length of visit which the team makes to a campus varies

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from two days in clinical psychology and engineering to six days in nursing. While on the campus, the team studies conditions and practices which cannot easily be judged from written reports, and in some cases, like social work, obtains additional information on points which raised questions in the reviewers' minds. The more general the standards are, the more significant the visit is, for without detailed measures on-the-spot judgments form much of the evidence of quality on which accrediting decisions must rest.

Once the visit is concluded, the members of the team report to the parent body their judgment on the quality of the program, supporting it with such evidence as they may have obtained. Usually, they point out weaknesses and strengths, and supply an overall judgment on whether the school meets the minimum standards. Each of the two members of the clinical psychology team reports his findings and conclusions independently, and the American Psychological Association's Committee on Evaluation considers each report separately before reaching a conclusion. In medicine, the visiting team sends its report to the AMA's Council on Medical Education and Hospitals, to the Association of American Medical Colleges, and to the Liaison Committee which represents both organizations. In most professions, however, the team submits one joint report to one body.

The commission or committee which has responsibility for accrediting uses the reports from the schools, the reports from the visit, and other means to arrive at a judgment. It usually recommends that its association or council approve, reject, or, in some cases, postpone action on the application for accreditation. Authority to recommend but not to award accredited status rests on the Committee on Visitation and Appraisal of the National Council for Accreditation of Teacher Education,

the Education Committee of the Engineers' Council for Professional Development, the American Bar Association's Council on Legal Education and Admissions to the Bar, and the Executive Committee of the American Association of Collegiate Schools of Business. Although the association or council usually acts in accord with its accrediting committee's recommendations, it need not do so. In fact, the decision to approve or disapprove rests so clearly on the AACSB itself that a two-thirds favorable vote of member schools represented and qualified to vote is required for approval of schools recommended by the Committee.

In several other fields, however, the Committee itself has virtually final authority to accredit, without subsequent approval of its association or council. Authority to this extent rests upon the National Architectural Accrediting Board, the board of the Accrediting Service of the National League for Nursing, the Commission on Accreditation of the Council on Social Work Education, and on the three bodies to which visitors to medical schools submit their recommendations (provided only that the three must agree on all favorable decisions).

Psychology uses the greatest number of reviews. The visiting team members make their individual recommendations to the Committee on Evaluation, which makes recommendations to the Education and Training Board, which makes recommendations to the Board of Directors of the American Psychological Association, which makes the final decision without submitting the question to the membership.

In several fields, a school which receives an unfavorable decision on its application for accredited status can appeal the decision. These are social work, teaching, medicine, and clinical psychology. Teaching has a board of appeals made up of

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five persons who are not members of the National Council for Accreditation of Teacher Education. A social work school can appeal to the Board of Directors of the Council on Social Work Education, which establishes a board of at least three persons to hear the appeal.

Provisional or Partial Accreditation

Several fields use provisional or partial accreditation as part of their procedures. There are three chief reasons for this practice. The first is that students entering a new school need assurance that it will probably be accredited before they graduate. A field like medicine, for example, operates under state licensing which will admit to examinations only students who have graduated from accredited schools. A new school of medicine cannot be accredited until it is in its fourth year of operation, but it may receive annual "provisional approval" based upon the expectation that it will meet standards for accreditation when eligible to apply.

A second reason is that new standards can be applied only gradually. Nursing has found provisional accrediting useful during a transition period. When it established its most recent accrediting procedures, it provided for "temporary" accreditation until the end of 1957, and "provisional" accreditation until the end of 1959. Since 1959, only full accreditation has continued.

A third reason is the need for time to correct deficiencies recognized through the process of accrediting, or reaccrediting. If the procedures allow for only approval or rejection, an established school which can remedy deficiencies in a reasonable time might be damaged unduly by being dropped from the accredited list. In architecture, medicine, and veterinary medicine, therefore, confidential or public "probation" may

be allowed to give the school time to repair its lacks before a final decision is reached.

Accrediting of Specialties

As we have seen in the chapter on curriculum, engineering recognizes over 20 specialties, each with its modifications of curriculum. The Engineers' Council for Professional Development accredits each specialty separately. The Council on Social Work Education accredited specialties separately since its establishment, but, again as we have seen, it eliminated accrediting of specialties in 1959. Clinical psychology and counseling psychology are specialties of psychology, and are the only parts of psychology subject to accrediting. Psychology departments as wholes are not accredited. Their peculiar status as accredited specialties of an unaccredited field perhaps explains why the American Psychological Association has set up so many steps in review of recommendations on accrediting.

Reaccreditation

It would be possible, of course, for a professional school to meet accrediting standards at the time of a review, and then through lack of continuing support, loss of key faculty members, or inertia, to slip below the minimum quality which the standards of accrediting require. To encourage continuous improvement and to assure continuing quality of program, most professions reinspect and reaccredit approved schools at set intervals. These include architecture, business administration, engineering, law, medicine, nursing, psychology, social work, and veterinary medicine. Teaching has made no provision for reaccrediting.

Almost every profession has a different length period between reviews. Engineering sets a maximum of five years. Busi-

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ness administration undertakes reexaminations at the discretion of the Executive Committee of the American Association of Collegiate Schools of Business. Social work reexamines newly-approved schools after three years, and began in 1960 to re-examine all schools at ten-year intervals. For other professions which customarily reexamine approved schools, the intervals range from three years for veterinary medicine to ten to twelve years for law.

Professions also vary in the rigor of the reexaminations. In medicine, they are so searching that the schools begin to prepare for them two years in advance. In clinical psychology, however, the reexaminations after five years are much less rigorous, being largely concerned with determining whether there have been crippling changes since the earlier review. The Committee on Evaluation will make revisits before the end of the usual five-year period if the department requests it or if the Committee considers it necessary.

Accredited schools in law, teaching, and clinical psychology submit annual reports to their accrediting agencies.

Announcement of Decisions

All professions publish lists of approved or accredited schools. None goes beyond this to publish the reasons for approval, or to distinguish between the strengths and weaknesses within the accredited schools. The accrediting committee normally informs the school of the bases of its decision, suggesting in a confidential report which elements of the school could be strengthened and where it appears unusually competent. Some professions, like medicine, social work, and veterinary medicine, place border-line schools on probation, letting the school know of its questionable status but withholding public announcement. Others, as we have seen, use a "provisional" rating

as in nursing, or an associate member status, as in business administration, listing these schools in separate categories.

Costs of Accrediting

Universities with a large number of professional schools complain of the cost of accrediting, since, with two exceptions, they bear the costs of travel and subsistence for the visits, and without exception bear the costs of preparing the materials on which the accrediting is based. These expenses can run into considerable sums. The exceptions are veterinary medicine and clinical psychology.

THE NATIONAL COMMISSION ON ACCREDITING

The National Commission on Accrediting was organized in 1949. It represents seven national associations which are composed of over 1,100 colleges and universities. Its function has been to reduce the evils of accrediting and to strengthen its values. In doing so, it has arrived at principles of sound accrediting which it uses as criteria to determine which accrediting agencies it will recognize and which it will disapprove. To some extent, therefore, the National Commission accredits accrediting agencies, since it recommends to its member institutions that they ignore the efforts of unapproved accrediting agencies to accredit colleges and universities.

Its first proposed solution for professional school accrediting was to direct certain professions to cease accrediting and to work wholly through regional accrediting associations for institution-wide accrediting, setting January, 1954, as the target date for this to be accomplished. Many professions protested the decision, pointing to legal requirements for accrediting of professional schools, the unreadiness of the regional associations to assume the full burden, and the unwillingness of the

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professions to accept university-wide judgments as adequate for judging its constituent parts.

At the same time, the professions stated their willingness to work with the National Commission and the regional accrediting associations in any way that would reduce the costs and annoyance of accrediting to the universities and would supply the professions with adequate judgments on the quality of the professional schools.

Out of these discussions, the National Commission modified its position. It recognized that the regional accrediting associations could not undertake responsibility for all accrediting by 1954, or probably at any time. It recognized also that it is necessary to continue accrediting the professional schools themselves, as well as the university in which they are located. It began working, therefore, to establish a procedure of joint reviews, in which the regional accrediting association would serve as coordinator of joint visits to campuses, so scheduled that representatives of the various professions would become parts of the visiting team, and the information needed by each profession could be obtained through a single inquiry, prepared jointly by the participating groups. The National Commission, the regional associations, and the professions and the universities have obtained enough experience with this procedure to recognize its values. For example, the Council on Social Work Education defines "the following distinct advantages for social work education in this kind of accrediting . . .":

- (1) the opportunity provided to study a school of social work in its proper relationship to all other schools and departments of the university;
- (2) the possibility offered for more effective development of schools of social work when recommendations are presented to the top officials of the university and carry the weight and prestige

of the regional association as well as the professional organization;

- (3) the opportunity provided for effective interpretation of social work education to educators in other fields and to other departments of the university through participation of social work educators on evaluation teams; and
- (4) the opportunity provided for sharing information on problems of general and professional education with leaders in their respective fields and for obtaining assurance that the educational bases upon which any profession rests are soundly related to the professional discipline.¹⁵

Further experience with joint accrediting has confirmed these early reactions. Not all accrediting of professional schools can be brought under the National Commission's procedures. For example, it may be necessary to accredit new schools without waiting for the joint review. But the success of joint accrediting is sufficient to support the prediction that it will be continued and that the number of separate accreditings by professional associations will decline.

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CHAPTER 8

Instruction in Professional Ethics

When ideals have sunk to the level of practice, the result is stagnation.

—Alfred North Whitehead

THE PLACE OF PROFESSIONAL ETHICS

A DISCUSSION of education for the professions can hardly avoid touching on ethics. Regardless of how little lay persons may know about the science and practice of professions, they are intensely interested in the ethics of professional practice.* Their interest makes action to disbar a lawyer, a malpractice suit against a physician, charges of kick-backs to engineers on construction into front-page news. The public expects ethical practice and conduct from professional men, and it is angered by violations of standards which it assumes ordinarily control practice. Each violation diminishes trust. Without trust, a profession would perish.

* "... The quality of service rendered is of deepest concern to the client.... He is interested therefore not only in the technical, but also in what may be called the moral, quality of the service." (Carr-Saunders and Wilson, *The Professions*, p. 394.)

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The reason for concern with ethics is not only that trust is essential to practice, but also that the professions have defined for themselves codes of conduct which are high in public esteem. Ethics for the professions, A. M. Carr-Saunders and P. A. Wilson suggest, are "largely an adaptation of the standards of the priest and the gentleman to the requirements of certain vocations in present-day life . . ." ² From these idealized figures, the professions draw their values of dedication and self-control, of service and magnanimity. When values are translated into statutes, violations lead to courts and punishment; when they are translated into professional codes, violations may lead to condemnation by the profession or to expulsion from it. The priestly derivation of professional ethics can be felt clearly in the way some professions use "Canons," a word with overtones of ecclesiastical law, to describe their codes of ethics. And the concept of "gentleman" creates the ideal of "noblesse oblige" for the practitioner which constrains him to provide succour to unfortunates without charge, and to hold that monetary returns are less important than giving service, even to those with ability to pay.

As the canons or codes of ethics have developed, they have focused on three major concerns:—protection of the practitioner, protection of the profession, and protection of the public. Different professions give different relative weights to these concerns, but each code of ethics for each profession deals at some point with them all.

The codes protect the practitioner by defining the ways in which he shall do his job. He can function effectively only if certain ways of working are possible. For example, if lawyers lost the right to hold in confidence what clients told them, no matter how damaging, they could no longer represent clients effectively. If physicians had responsibility of bringing death

when they thought it best to do so, they would lose the trust on which their success may well rest. If architects received money from building supply houses as well as from clients, builders would reject their judgments on materials. Since the practitioner can work effectively only under certain conditions, the codes attempt to shape his conduct in ways that will maintain those conditions for all members of the profession.

The codes are also concerned with maintaining the effectiveness of each profession itself. They try to regulate conduct so as to foster unity and solidarity. An engineer "should uphold the honor and dignity of his profession. . ." ² ". . . every Architect should do his part to forward justice, courtesy, and sincerity in his profession." ⁴ They prohibit a practitioner from making unwarranted accusations of incompetence or unethical practice against other members of his profession, and in the "fee" professions enjoin him from undercutting other members in bidding for employment. The codes, on the positive side, call for active participation in professional associations and for the sharing of information and ideas with other members.

These prohibitions and admonitions encourage mutual support among members of a profession, and identify them with it. The codes serve to establish and maintain a professional body which can support and is supported by the efforts of its members. Association by profession can help keep competition among members within bounds, can help modify the legal bases upon which the profession rests, can regulate entrance into the profession through accrediting schools and aiding licensing, can withstand encroachment from other professions, and can constantly work toward raising the standards of practice.

But the efforts of a professional association to maintain the "guild" can, and at times have, run counter to achievement of a profession's major aim—to provide services to the public. At

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these times, professions have seemed more concerned with the welfare of the practitioner and association than of the public.

Carr-Saunders and Wilson found in the England of the 1930's that practitioners gladly supplied services without recompense to individual indigents who sought services but that they rarely concerned themselves with satisfying the unmet needs of the population as a whole until threatened by encroachment from another profession.⁶ Possibly, the successful struggle of the American Medical Association to prevent national health insurance in the United States is another instance. Professions can become guilds, striving more earnestly for protection of self than for service to the public.

If or when they do, they are running counter to their own codes of ethics, for without exception these emphasize obligations to protect and serve the public. Chapter I, Section 1, of the *Principles of Medical Ethics* of the American Medical Association begins: "The prime object of the medical profession is to render service to humanity . . ." The Engineer's Vow of Service, adopted by the American Association of Engineers in 1927, affirms that for the engineer a guiding purpose is "to place Service before profit, the honor of the Profession before personal advantage, and the Public Welfare above all other consideration."⁷ Codes of other professions give a similar rank order of values—to the public, first; to the profession, next; and to the practitioner, last.

Professional ethics which reflect this order of values are indispensable, because the client has no effective means—prior to disastrous or satisfactory personal experience—of evaluating the competence of the practitioner he plans to use. He can learn a little from friends and neighbors, but their judgment is not expert. All the experts are in the profession, and experts are chary with comments on colleagues. If practitioners are not

guided by the ideal of public welfare, even at expense to themselves and to their profession, the client can easily be sacrificed to self-interest or professional identification. The order of values is also needed to encourage the practitioner to make the competences he supplies more widely available to people needing help, by preventing the problem—as through sanitation or inoculation in public health, or by reducing catastrophic cost as through insurance, or by giving free service to indigents as through devices such as clinics.

Codes of the professions make altruism rather than self-interest the dominant guiding principle, an inescapable principle, of professional practice. The principle is so significant to professional practice that its presence or absence helps to define whether an occupational group is truly a profession. In 1915, Abraham Flexner told a meeting of social workers that an occupational group must meet the criterion of "becoming increasingly altruistic in motivation,"⁷ to deserve the term "profession." Incidentally, Flexner recognized that social work more than met this criterion, although he questioned whether it fully met certain others. Ralph W. Tyler goes even further. He considers the code of ethics as the first of two "essential characteristics" of a profession. He says:

From the standpoint of the education required, there are two essential characteristics of a true profession. The first is the existence of a recognized code of ethics. This ethical code commits the members of the profession to certain social values above the selfish ones of income, power, and prestige.⁸

Morris L. Cogan in attempting to define a profession concludes: "The profession, serving the vital needs of man, considers its first ethical imperative to be altruistic service to the client."⁹

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Such a strong emphasis on the ethical component of professions implies that the associations must make equally strong efforts to assure themselves that the practices of the profession coincide with or, at the very least, move toward its ethical standards. Otherwise, a profession risks disintegration. A code of ethics guides behavior of practitioners in socially desirable directions by constraining undesirable acts and by outlining visions of ideal behavior toward which practice can move. Many professions, like architecture, law, and medicine, have established procedures for expulsion of flagrant offenders. Other professions are less severe in their punishment, but all use group pressure to penalize violations. Presumably, punishment in extreme cases deters other practitioners who may be coveting the rewards of violations. But punishment can never be sufficient to offset lack of knowledge of the code or lack of self-discipline in following not only its expression but also its intent. Exterior controls can never substitute for inner convictions; a "policed" profession would be a poor substitute for an ethical profession.

No one has yet discovered how to make people universally good. Equally, no profession has discovered how to make its members uniformly ethical. But professional education has an obligation to help students achieve whatever knowledge and attitudes are necessary to guide their behavior in accordance with the ethics of the profession they have chosen to enter. Ethical practice is as much an objective of professional education as competent practice. Tyler points out, "Education is a process for changing the behavior of students in desired directions. . . . When a student is educated he has acquired ideas, habits, attitudes, interests, ways of thinking, and professional skills which he did not have before he went to college; his behavior has been changed."¹⁰ One "desired direction" is toward

ethical practice. The professions have a right to expect the schools to modify a student's behavior so that it will conform with professional ethics. To be sure, the schools cannot do it all; the profession has further and continuing responsibilities. But the schools must do their share, regardless of the difficulty of the task.

The rest of this chapter looks at what the schools are doing to inculcate professional ethics in their students. It considers the content and method of instruction, and compares the practices of schools in the different professions.

CONTENT OF INSTRUCTION

Essentially, the content of instruction in ethics for each profession rests in the code which the profession has adopted, and the interpretations it has made. These are the basic texts, since the hope is that the student will adopt the admonitions and principles of the code as guides to his practice.

Some professional schools recognize that codes of the professions are based on general ethics, and encourage their students to take courses on ethics in the liberal arts colleges. For example, engineering students at the University of Detroit and Marquette University are required to take formal courses in ethics along with all other students. These courses may include discussions of "the nature of ethics; the norm and determinants of morality; natural and eternal law; rights and duties of the individual; etc."¹¹ Where such courses are required of all undergraduate students, professional students naturally participate in them also.

METHODS OF INSTRUCTION

Reports from the various professions imply that most professional schools are concerned with inculcating professional

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ethics in their students. Available information is not specific, however, and methods can be described only in fairly general terms. It may be useful to group the descriptions into those of the "facilitating" professions—architecture, business administration, engineering, and veterinary medicine—and those of the "helping" professions—law, medicine, nursing, psychology, social work, and teaching. We might expect that the "helping" professions would do a good deal more with professional ethics than the "facilitating" professions.

Facilitating Professions

Architecture:—The profession of architecture has a great concern for ethical practice, based upon such concepts as service and sacrifice, integrity, stewardship, and altruism. This concern is expressed in the Oath of the Architect¹² and in its code of ethics, which says:

The profession of architecture calls for men of the highest integrity, judgment, business capacity, and artistic and technical ability. An Architect's honesty of purpose must be above suspicion; he acts as professional adviser to his client and his advice must be unprejudiced; he is charged with the exercise of judicial functions as between client and contractors and must act with entire impartiality; he has moral responsibilities to his professional associates and subordinates; he is engaged in a profession which carries with it grave responsibility to the public. These duties and responsibilities cannot be properly discharged unless his motives, conduct and ability are such as to command respect and confidence.¹³

In spite of architecture's great interest in ethical practice, little information is available on what the schools do. *The Architect at Mid-Century* defines the objectives of architectural education in considerable detail, as we have seen. But it mentions "ethics" only as part of the basic knowledge in the human-

ties which it recommends for students, along with philosophy and the history of ideas.¹⁴ In a fifty-page chapter on the curriculum, the same volume again mentions ethics only once. It says that courses in architectural practice "usually discuss such topics as the nature and composition of the profession, professional cooperation and ethics, the techniques of performing architectural services, and the administration of architectural offices."¹⁵ These courses are usually scheduled in the final term and may often be taught by visiting architects.

Courses are supplemented by counseling of students, and schools encourage students to enter undergraduate chapters of the American Institute of Architects where they may be introduced to ethical problems of practice. These seem to be the most usual methods.¹⁶

Business administration:—Business administration has not established a code of ethics, and any efforts its schools might undertake to teach professional ethics are handicapped by that fact. Literature in the field does not include information on the teaching of ethics, insofar as I can ascertain.

Engineering:—In contrast, the literature of engineering education has frequent references to general and professional ethics. The Grinter Report, for example, points to the need for development of "a sense of moral and ethical values consistent with the career of a professional engineer."¹⁷ *General Education in Engineering* reaffirms the objective stated in the Hammond Report of 1940 for "the development of moral, ethical, and social concepts essential to a satisfying personal philosophy, to a career consistent with the public welfare, and to a sound professional attitude."¹⁸ The concern is also expressed by the fact that the American Society for Engineering Education has a standing committee on ethics. None of these recent efforts matches the sweep of Morris Lewellyn Cooke who said

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in 1918: "Until we engineers can place the service of humanity as the significant and dominant plank in our platform, the profession will continue to have the status of the hired servant, and veer here and there as the winds of business and other special interests may dictate . . ." ¹⁸

In its first report to the ASEE, the Committee of Ethics recommended

That the faculty of every college or school of engineering be concerned with instruction of all students in general and professional ethics; and with their motivation so that they will comply with ethical standards after graduation.¹⁹

Engineering schools have accepted the recommendation, but engineering educators are by no means agreed on the best way of inculcating the principles they have defined. The Committee on Ethics finds that "ethics is taught by engineering colleges in many ways, some by direct methods, even more by indirection." It discovered examples of teaching which grouped themselves into:

1. "complete," formal courses in general ethics and philosophy;
2. courses in which ethics is treated formally, but with other, usually associated, material;
3. courses in which ethics may be introduced, more or less informally, as the opportunity presents itself;
4. extra-curricular meetings, forums, or seminars in which ethics may be featured or discussed;
5. the intellectual and moral environment of the institution as reflected by educational objectives, faculty behavior, honor systems, etc.²⁰

These methods seem to have become standard for engineering. In 1955, the Committee on Ethics reported that nearly

half the schools were giving lectures or holding conferences on general or engineering ethics or both. "But," the Committee said, "the operation of the program seems rather casual in some cases." About one-fourth of the schools depended "entirely upon an environment or a spirit of honor on the campus, and on the inspiration and superior deportment of the faculty. About one-sixth of the schools left the responsibility for ethics to the departments themselves. About one-tenth required students to take courses in ethics or religion or both. A few stated that they were doing nothing whatever."²²

Although the amount of activity sounds impressive, the Committee on Ethics has doubts about its organization. It reported in 1957 that "One of the major defects in the present situation is that few if any schools have a comprehensive, planned program for teaching ethics. So much seems to be more or less just left to chance."²³

Veterinary medicine:—The profession of veterinary medicine has adopted a code called "Principles of Veterinary Medical Ethics" whose Preamble states:

The honor and dignity of our profession lies in our obedience to a just and reasonable code of ethics set forth as a guide to members. The object of this code, however, is more far-reaching, for exemplary professional conduct not only upholds honor and dignity, but also enlarges our sphere of usefulness, exalts our social standards and promotes the science we cultivate.²⁴

Some veterinary medical schools offer formal instruction in ethics, either as separate courses or as part of veterinary history courses. But not all schools do so. To increase the number, the Committee on Ethics of the American Veterinary Medical Association has recommended to the Council on Education that it establish as an accrediting standard a course on "veterinary

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medical ethics as a requisite in an approved veterinary college." ** Apparently, the Committee on Ethics is convinced that less formal means will not suffice.

Helping Professions

Law:—The legal profession has long been concerned with the problems of maintaining ethical practice. Since the lawyer is an officer of the court, justice itself may rest upon the quality of his practice. Bar associations therefore expel lawyers who flagrantly violate their code, by securing their disbarment or suspension from practice. The severity of punishment equals the importance of ethical behavior.

Again, however, when we look at what the schools are doing to inculcate ethical principles, we find considerable confusion. Law schools often offer special courses in ethics. Professor Elliott E. Cheatham found in a survey made in 1950, that about two-thirds of the law schools offered courses on "professional functions," chiefly on legal ethics. Most of the schools were giving courses which carried one hour credit. Some "courses," however, consisted of three or four non-credit lectures. Furthermore, the number of law students at different schools who took the "professional functions" courses varied widely, ranging from 100 per cent at some schools down to 25 per cent at others, with somewhat more than half taking the course in most of the schools which offer it. Within the courses, seminars, lectures, case studies, and projects have all been used as methods of instruction. But not many schools are satisfied with what they are doing. "Yet there is no uniformity in what the schools are now doing or in what they believe should be done." **

Medicine:—The medical profession traces its written code

back 2,500 years to the Oath of Hippocrates. Its concern with ethical conduct has been so consistent that "the ethics of physicians have been regarded as among the highest of the professions."²⁷ In the United States, the written code of medical ethics dates from 1848. All members of the AMA must agree to conform to the "Principles of Medical Ethics." The AMA may expel a member who violates the code, and may therefore prevent his practicing further.

Medical schools are concerned that they do what they can to maintain the ethics of the profession. Most of them "emphasize the importance of constant presentation of ethics, economics, and public relations as an integral part of all phases of undergraduate medical education in the precept and example of teachers and members of the profession with whom students have contact."²⁸ But fewer devote special attention to it. Only 40 out of 81 schools make a "specific allocation of time" to the teaching of ethics. Where allocations are made, they vary from 2 to 64 hours of the four-year curriculum. The course, when given, is located in varied places—under course titles of medical ethics, cultural medicine, public relations, philosophy of medicine, or social and environmental medicine. The schools supply instruction through the dean or other administrative officers, in departments of medicine, of public health, or of preventive medicine, jointly by several departments, or even by local medical societies.²⁹

Schools which do not teach medical ethics through courses depend on observation and discussion among small groups of students on the wards and clinics, but these come during the clinical years.

Medicine, like law, is not satisfied that it has yet found the proper methods for instruction in ethics, particularly in a

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period when the practice of medicine is changing rapidly. According to one observation:

There is at present relatively little information about ethical problems imparted in the medical curriculum. Many ideals and attitudes are passed along unconsciously from teacher to student, but this may not be enough in an era when ethical attitudes are no longer forced upon doctors by close and intimate contact with patients. Possibly the answer lies in a greater stress on moral character in the selection of medical students and in a greater stress on the teaching of ethical principles in medical schools.⁵⁰

Nursing:—The major in nursing includes information on nursing as a profession, under titles like "Introduction to Nursing" and "Nursing in Society." Such courses are largely concerned with purposes, attitudes, responsibilities and behavior of students and of practitioners. They deal often with ethical questions. In addition, Dr. Margaret Bridgman suggests that a course in ethics might well be included as part of general education.⁵¹

Psychology:—The American Psychological Association published its code of ethics in 1953. Many psychologists participated in its preparation. Need for the code had been precipitated by the rise of clinical psychology and industrial psychology, with their new relationships with society, clients, other practitioners, and other professions.

A few departments of psychology offer separate courses in professional ethics. More often, however, the departments provide instruction in ethics through more inclusive courses dealing with professional problems. These basic methods are supplemented by others—making students aware of ethical problems and decisions in the practicum, holding special meetings, giving lectures, inviting practitioners to speak on special

occasions, and underlining the ethical problems implicit in mental hygiene and psychotherapy. As other professions do, psychology expects teachers and practitioners who come in contact with students to exemplify ethical conduct. Finally, some departments attempt to select only students who exhibit ethical attitudes.²²

Social work:—The American Association of Social Workers adopted its code of ethics in 1947. It outlines principles which should govern professional conduct of the social worker in relation to his client, his employer, his colleagues, his community, and his profession.

Because of its strong concern with relating classroom and field experience, social work places considerable emphasis on making sure that teacher and field supervisor exemplify the ethical practices which the code calls for. In addition, however, classroom instruction early in the first year of the curriculum often begins to deal with principles of ethical conduct. Dean Arlien Johnson, of the University of Southern California, obtained information on instruction in ethics from 27 of the 28 social work schools which enrolled more than 60 students each in 1953. Fifteen of these schools were teaching ethics in a special course; 12 were not. In the 15 schools, the course had the title of "Philosophy of Social Work," "Social Work as a Profession," "Ethics and Social Work," or something similar. The code was required reading in all but one school to which it applied. (It does not cover the two Canadian schools which were included.)

All but one of the 12 schools that gave no special courses stated that they provided instruction in ethics in other ways—either as a component of almost every course, or, more customarily, as part of methods courses, or by the field agency. Of

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the 12 schools, however, only five required students to read the AASW code.²²

Like other professions, social work is not wholly satisfied with instruction on ethics. Its Social Work Curriculum Study (1959) includes a volume entitled *The Teaching of Values and Ethics in Social Work Education*. Its hope is to find better ways of attaining the end of proper professional conduct.

Teaching:—The National Education Association adopted a code of ethics in 1929. It has been subject, as codes of professions are, to considerable revision since that time, the most recent being in 1952. It applies only to members of the NEA, but this includes the largest number of teachers of any organization. The code states as a self-evident truth "That whoever chooses teaching as a career assumes the obligation to conduct himself in accordance with the ideals of the profession."²³

The Committee on Professional Ethics has published a study *Professional Ethics in the Preparation of Teachers*²⁴ which suggests ways of teaching ethics. In spite of this and numerous other efforts of the NEA, a recent study states that professional ethics are neglected in teacher education, since "few if any schools devote a full course to the subject. The result is that professional ethics are usually neglected or given scattered and haphazard treatment in programs of teacher education."²⁵

Summary

Reports on methods employed in teaching professional ethics may be entirely inadequate. Taken as they are, however, they force the conclusion that professional schools have not considered their obligation to professional ethics as strong as their obligation to professional competence. They are not sure which methods of teaching are effective, or even that professional ethics can be taught in such a way as to affect the

behavior of students. The words "casual" or "haphazard" occur with some frequency in descriptions of what the schools are doing. In this, there seems to be little distinction between the efforts of schools for the "helping" professions and schools for the "facilitating" professions. Schools are convinced that the example of faculty and practitioners are of equal, if not greater, importance than the precept of classroom or code. Even if true, this fact would not, it would seem, free the schools of obligation to make sure that the examples were understood through analysis and through distillation of principles from facts in the same way that they would approach the understanding of other phenomena. Until they do more than they seem to be doing, the practice of professional schools will not be worthy of their objective of ethical conduct for their graduates. The schools alone cannot assure that a profession is ethical in its practice. But they are not fully discharging the responsibility to do their part.

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CHAPTER 9

Conclusion

What education has to impart is an intimate sense for the power of ideas, for the beauty of ideas, and for the structure of ideas, together with a particular body of knowledge which has peculiar reference to the life of the being possessing it.

—Alfred North Whitehead

COMPARISONS among the ten professions which this volume considers inevitably suggest some general comments on professional education itself as it is conducted in the United States. Of the many that might be made, I should like to comment first on some assumptions which appear to underlie the conduct of professional education; second, on some of the areas in which additional studies and research are badly needed; third, on the need for an annual national conference on professional education; and, finally, on differences and similarities of professional education in the various fields.

ASSUMPTIONS

Although education for each profession differs from all others in many particulars, the similarities are just as striking,

so striking in fact that they make it clear that the schools for the various professions operate to a substantial extent upon common assumptions which supply the guides by which the policies and practices of the schools are determined. Their use gives continuity and consistency to the schools' efforts, and creates the similarities among them. Some are made explicit by statements of professional educators and by official policies of professional associations. Others are implicit in the actions of the schools.

Society's demands for professionally educated persons will continue to increase, but these demands can be met without substantial change in professional education programs. Each profession we have studied assumes that demands for its services will continue and will probably increase, as population grows, prosperity expands, and the work-week shortens. Some professions, like engineering, teaching, social work, and nursing, face critical shortages now, without waiting for population growth. Most professional educators, in whatever field, can tell plaintive stories about how greatly the number of requests they receive for graduates each spring exceeds the number of graduates.

At the same time, most professional educators assume that this increasing demand can be met through programs which are largely unchanged. During World War II, when the demand for physicians pressed beyond student capacity, medical schools operated on an "accelerated" schedule, under which they ran for eleven months a year, making it possible for students to complete their work in three years instead of four. With the single exception of the University of Tennessee which has operated on what it calls a "four-quarter system" since 1923, no medical school is advocating using the fourth quarter as a means of expanding the capacity of the schools and thereby

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meeting the apparent shortage of physicians. Instead, the effort has been to retain the same program of the same length, and build additional schools. Other professions seem to have reached the same decision.

Violent social upheavals are unlikely. When Russia launched its Sputniks into the sky, it created a substantial furor in the United States over education for scientists and engineers. The Congress of the United States began considering millions of dollars in appropriations to strengthen and expand scientific and professional training. But the hysteria was short-lived. Even the landing of U. S. Marines in Lebanon did not suggest broad changes in professional education, or make certain that the Congressional bills would pass. Professional educators do not assume that war is imminent, either by their statements or by the actions of the schools. If the schools and the professions considered war an immediate threat, they would be busily changing their curricula to meet the requirements of a war economy, in which the demands for professionally-educated persons would skyrocket and many male students would be taken directly into the armed services. If they considered war to be imminent, the schools would be compressing curricula into shorter periods, establishing training of technicians to support and supplement the expected short supply of professional people, and recruiting women into fields now dominated by men. They are not.

On the other hand, professional educators are equally sure that professional people will continue to be in demand, and that the public will continue to be able to pay for their services. They assume that a major depression is not likely, even though the recession of 1958 reminded them that it could happen again. They assume, however, that the threat of war will continue, and with it billions of dollars will be spent on war pro-

duction, thus bolstering the economy to operate much as it does now. If they assumed that the threat of war might be expected to drop sharply, or even that military spending would be cut far back, they would recognize the possibility of a depression which would drastically reduce the demand for professional people. Instead, they stand between the imminence of war and the likelihood of depression, so that they see an increasing but not explosive demand for professional people in the coming years.

The professions as now organized will continue, with such modification as occurs coming through evolution rather than through cataclysmic change. Professional schools through research and investigation serve as agents of change, but as educators of new practitioners they assume a certain stability of role for the professions they supply. They need a minimum of from two to four years to complete their part of educating a professional person, and they have to assume that the profession will remain substantially unchanged, or will change but slowly, if they are to decide on content and methods of instruction. Since principles outlast skills, they can manage evolutionary change by emphasizing understanding of the principles of practice rather than mastery of the skills of practice, but they must assume essential stability.

There is always the possibility that a major "break-through" in scientific knowledge will change the role of a profession almost overnight. A drug that eliminated schizophrenia could half-empty the mental hospitals and release psychiatrists, clinical psychologists, social workers, and nurses for other duties. But the schools assume that such an event won't happen because it isn't likely that it will, except in rare instances. They continue to educate for what is, with sufficient effort to create graduates flexible enough to deal with what will be. Instruction

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in schools, therefore, tends either to lag behind practice or to lead it by a very short distance only.*

Knowledge on which practice of the professions rests will continue to expand. Professional educators assume that knowledge is and perhaps always will be expanding, if freedom of investigation can be maintained. Each profession, therefore, is concerned with encouraging research in the sciences which underlie it, and each is concerned that its schools incorporate the newer knowledge in the instruction they provide. Professional educators constantly struggle with the necessity of incorporating new knowledge, sloughing off less useful experiences, consolidating others, and adding some. The curricula cannot be allowed to become fixed and hallowed. They must be subject to change as necessary.

Along with this assumption of increasing knowledge goes the conviction that the length of present curricula must not be extended. Professional educators are therefore forced to discover ingenious ways of incorporating new material. In general, their conclusion is two-fold: they must emphasize principles at the expense of skills, and they must discover unifying concepts around which large masses of material can be organized.

The knowledge and skill required for practice of a profession are too complex to be transmitted by "apprenticeship." Professions from time immemorial have depended on a modified form of apprenticeship to train candidates for practice. The

* "In general, it has only been long after the practitioners found themselves ill equipped to undertake tasks thrust upon them...that the universities responded with changes in their existing training programs or initiated new planning programs. On the whole, planning education has tended to follow somewhat haltingly after the march of practical events, rather than to anticipate needs and to develop new knowledge and methods." Harvey S. Perloff, "Education of City Planners: Past and Present," *The Journal of the American Institute of Planners*, Vol. 22, No. 4, Fall 1956, pp. 195-196.

"apprentice" in the professions worked with the master over a period of years until he too became proficient in the art. An aspiring professional might "read" law in a law office and be admitted to the bar without ever having taken a college course. He might work in a hospital or an architect's office until the skills became his own. He might learn to nurse by nursing, to teach by teaching, or to run a business by "starting at the bottom of the ladder." The assumption on which the professional schools rest runs directly counter to this form of training. Professions, the schools hold, have become too complex, too heavily based on the sciences, too dependent on broad and deep knowledge, to be adequately staffed in this manner. Before one can satisfactorily learn skills, they hold, he must learn the knowledge which supports those skills. He can learn this knowledge most quickly and usefully from specialists in instruction, in other words, from teachers in professional schools. The assumption has the force of law in education for medicine, teaching, veterinary medicine, clinical psychology, and is approaching it in education for law, engineering, and architecture. In these fields, education in a professional school is a prerequisite to practice for all or most of the entrants.

No one can precisely predict the future life of an individual, but his occupation will likely be that for which he obtains professional education. In addition, professional people will be leaders in civic affairs. Professional education operates on the assumption that students who complete its tasks will enter and continue in the profession for which they have been educated. Such flexibility as professional education may develop in students is limited to the practice of the profession toward which it is aimed. To a considerable extent, therefore, the choice of a student to enter a professional school is irreversible, unless he is willing to suffer a severe loss of time. He must enter

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another professional school if he wishes to change his occupational objective.

This assumption is held in face of the fact that, in some professions, there is substantial loss of practitioners after a period of practice. Law loses practitioners to politics, government, and industrial management, for example. Teaching, nursing, and social work, in which women predominate, lose to domestic life. In general, however, the assumption is sound, for once a person enters a profession, he is likely to continue in it unless he leaves professional occupations altogether.

Most of the professions add another concern. They assume that professional people will likely be leaders in civic affairs, in community, state and nation. They therefore are concerned that the curricula of the schools help establish competence for leadership generally as well as competence in the professions.

Professional education can satisfy both occupational and general aims. It can aid students to obtain knowledge and skills required by professional practice, and it can help them to modify their personalities to the ends of practice. It can also, either directly or by collaboration with the rest of the university, help students to achieve the aims of general education. Professional educators are concerned that instruction help students obtain the knowledge and skills required by practice, and they derive the curricula in part from analyses of practice. But they are by no means content with strictly occupational ends alone. They assume that the various experiences that go to make up the total curriculum will help provide competence to practice, but they are not satisfied with defining that competence in narrow vocational terms. They see the need clearly for broader understandings than the science and art of a single profession can supply, and they therefore include in the total curriculum other experiences designed to provide the student with understanding

of self and understanding of his environment—animal, vegetable, and mineral. So concerned are they with this second goal that they sometimes feel it necessary to provide the experiences themselves, through courses taught by their own faculties. More often, however, they depend on the rest of the university, particularly the liberal arts faculty, for this purpose.

The schools, the professions, and government have responsibilities for the quality and quantity of service rendered by the professions. Professional education is an activity in which many groups participate, joining their competences and resources to the common end of staffing the professions with adequate numbers of qualified people. The schools recruit, select, and educate students, certifying to the profession and the public through award of degrees those students who have acquired a base of knowledge and skills upon which professional competence can be erected through experience and further study. But the schools do not assume that they can do this unaided or alone. They relate themselves more or less closely to the other groups who also have significant responsibilities.

The profession, usually through its professional association, also recruits students. It establishes and enforces standards of education through accreditation of schools, provides opportunities for students to gain field experience, and admits entrants into the profession only upon certain standards, which can be met by graduation from approved schools. The state government supports a large number of the professional schools through legislative appropriations, sometimes supplies funds to students in fields of great need, and defines and enforces standards for entrance into practice through licensing. The Federal government supplies funds for certain professional schools, such as agriculture and engineering in land-grant colleges, and in recent years has rapidly expanded its aid to stu-

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dents through grants. Industry, philanthropic foundations, and private donors, also contribute to the support of professional schools and supply funds to students.

Some efforts have been made to modify these relationships. Medical educators have obtained Federal funds for medical school buildings. As we have seen, the universities have tried to abolish accrediting by professional associations, and have succeeded in modifying the manner in which it is conducted. Clinical psychology, after considerable psyche-searching, has been pushing for licensing by the states. All these efforts support the assumption that all these groups have responsibilities in the planning and conduct of professional education.

STUDIES

This volume could hardly have been written had not several of the professions made national studies which describe and analyze education in particular professions. These studies have supplied invaluable data from which comparisons could be drawn. They vary substantially in content and focus. Engineering's 36 page report on the evaluation of engineering education is composed almost entirely of recommendations to the schools.³ Architecture's 513 page report with 62 tables added obviously attempts more, including description of "the nature of the current practice of architecture and the evolution as well as the present educational methods to prepare youth for that practice."⁴ It, too, incorporates recommendations to the schools. Other studies fall in between these two extremes. Some comparative data are supplied, but in general each study focuses on its own problems and practices with little attention to what other professions are doing.

Not only is this natural, it is probably desirable. Without basic data for the professions themselves, each by each, com-

parisons would be useless. But it is my conviction that studies of individual professions are not enough. We need comparisons, too, so that each profession can learn from the others, testing its own practices against other practices to avoid formalism brought about by professional provincialism that considers only itself, and to obtain the stimulation of new ideas emerging from different situations which might have value when adapted for use elsewhere.

Evaluative Studies

As we have said, this volume makes no attempt to evaluate the practices which the various professions have established for their programs. Evaluative studies are needed, however, to guide the decisions of professional educators as they build their programs. Accrediting standards are one sort of guide, but these too are often established with little knowledge of what other professions have found successful or faulty. The topic of each chapter of this volume might well form the basis of another volume, which would take that topic, compile the practices of each profession on it, and find ways of evaluating the usefulness of the various practices. Since education for the various professions is largely focused on the same aims and objectives, and since it operates on at least some of the same assumptions regardless of its situation, evaluation of differing practices, though difficult, would not be impossible. Practices in education for the professions are sufficiently different to make likely that the results would show substantial differences also. An evaluative study of instructional methods, for example, might serve as a guide through the amazing variety of methods which professional schools use, helping the schools to find practices which are more effective than the ones they

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now employ. At least, such a study might stimulate a great deal of experimentation.

Special Studies

Several other studies would be of great usefulness to professional educators. These overlap in part with the evaluative studies, but they would fill serious gaps in the literature of professional education.

Social need:—It may be too much to hope that a study could help define what the social need for each profession will be as the years pass. But some attempt to do so should be made. Planning professional education is handicapped when it has little on which to base its projections of need for graduates. Usually, the need must be present before the schools can act to meet it. We should be able to do better than that. Wolfe in *America's Resources of Specialized Talent* attempts the task in part. But a good deal more effort is needed, not only profession by profession, where considerable work has been done, but among professions, for the guidance of administrators and legislators who have to choose among professional schools when building universities.

University organization:—As professional schools have expanded, the problem of their relationship to the university has become more and more acute. Each profession wants autonomy for its professional school, meaning that the head of the school should report to the president. But this becomes impossible as the number of professional schools increases, and various devices are being used to reduce the span of control which such an arrangement forces upon the president. These variations need to be studied, not solely from the point of view of the professions, but also from their impact on the university and the profession. A president cannot extend his direct control

indefinitely, but what is the preferable alternative? Should all professional schools concerned with the health fields be grouped, and others continue to report directly? Should all be grouped under a vice-president for professional schools? Or should professional schools be made parts of large divisions of universities, as Robert Hutchins suggested, identifying them with the sciences most closely related to their subject-matter? There are other questions, too. What should be the relationship of the professional schools to the graduate school? The school of liberal arts? But the basic question is the place of the professional school in the university, and this cannot be satisfactorily decided school by school or profession by profession, no matter how much each profession wishes autonomy for its own schools.

Motivation:—Motivation studies which define why faculty members in professional schools prefer to teach and why students choose the professions for which they are studying might do much to aid recruitment. All professions now assume that they could obtain faculty easily if salaries were high enough, but the medical schools, where salaries are high, seem to have as much difficulty in obtaining faculty as do other schools. It seems likely that we do not know enough about what attracts faculty or students to be sure of our ground. It would help to know.

Instruction in ethics:—If the topic of each chapter was made the subject of an evaluative study, ethics would be included. But it is doubtful whether a study of present practices in the teaching of professional ethics would be sufficient a guide. There is doubt, for example, as to whether a school has any effect on the values of students regardless of what they study. Philip E. Jacob found that "for the most part, the values and outlook of students do not vary greatly whether they have pursued a conventional liberal arts program, an integrated general

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education curriculum or one of the strictly professional-vocational options." * Unless professional schools wish to throw up their hands in resignation, they must find ways by which they can affect student values, at least in so far as those values are part of professional ethics. Otherwise, they must eliminate their objective of ethical behavior, and leave the responsibility wholly to the profession. Experimentation as well as studies is needed to find the ways by which ethical principles can be taught effectively. Professional schools do not know the answers now. They need them.

Costs:—Calculation of relative costs of professional schools is difficult, perhaps impossible, unless universities establish some sort of uniform accounting system that makes comparisons valid. Costs to students could be compared by information from catalogs, but the much more important information about costs to the universities is lacking. Even within a single profession there is considerable confusion. Deitrick and Berson point out, for example, that "The public is thoroughly indoctrinated with the idea that medical schools and medical education are very expensive." But they also show that medical schools perform many other functions besides the education of physicians. They therefore claim that "Medical school costs are very low in comparison to the value of their products." * Their conclusion is that "The various figures purporting to show the cost of educating a medical student are misleading and should not be relied on." *

Other professions, however, believe that the costs of medical education head the list, even though they cannot support the judgment with figures. Architecture satisfies itself with the statement that "it is probable that the cost of the architectural curricula is approximately the same as those in liberal arts, but much lower than those in engineering, the sciences, and medi-

cine which demand expensive laboratory instruction and facilities." Law is unhappy that it has not received amounts comparable to those provided for medical education. Dean Harno quotes with approval the California survey which states:

The law schools in California, in common with law schools throughout the United States, are suffering from financial starvation, and have been from the time of their organization. Vast sums of money have been available for education and research in medicine and in various scientific fields, but practically none has been provided for the education of the bar or research into those problems of social and legal engineering with which the legal profession has a public duty to deal.*

Comments of other professions could be cited, but these are enough to underline the confusion. That confusion will undoubtedly continue until we can obtain enough studies of costs of professional education to make comparisons feasible. The National League for Nursing has been attempting to find ways of recording and analyzing the costs of nursing education to give accurate data within that profession. If others would do likewise, university officials might eventually be able to learn what it would cost to operate a professional school, with some assurance that the figures had reality. Studies here are essential, as the numbers of schools and the costs of operating them both continue to rise.

Terminology:—Nothing shows the need for comparative studies of professional education so quickly as the terminology which the professions use to describe the parts and procedures of their programs. As a beginning, a careful glossary of terms used in the various fields should be prepared. It would be extremely helpful in extending the understanding of the professional literature. Once that is done, the professional educators

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should work toward the development of a uniform terminology that would describe the phenomena they consider with some precision and uniformity. At the moment, there is no assurance that a term used in one profession will have comparable meaning when used in another. For example, the term "laboratory" may call to mind a room equipped for experiments in medicine or testing in engineering, but in teacher education "professional laboratory experiences" means something quite different. There it covers "all those contacts with children, youth, and adults (through observation, participation, and teaching) which make a direct contribution to an understanding of individuals and their guidance in the teaching-learning process."⁹ These are what social work might call "field instruction," medicine and nursing, "clinical instruction," and clinical psychology, "the practicum," but none would call it laboratory experience. The fact that each uses a different term compounds the confusion. Because each has its own words, or its own meanings for words the others use, the terminology of professional education builds its own Tower of Babel. Studies could help.

NATIONAL CONFERENCE

Anyone naturally hesitates to suggest another educational conference to add to the plethora which already exist. But the need exists, and it should be met. Professional educators should not be required to wait for the comparative studies which will give them understanding and information on what educators in other professions are doing. They need the opportunity to talk with their colleagues. They need to cross the lines of professions to territory other than their own, and to search for useful materials there. They may return to their own fields with solutions they can employ. At the very least, they will probably return to look at their own practices with a more informed

and critical concern. All professions have national meetings in which professional education is at least one of the subjects for study. But even the large conferences, like that of the land-grant colleges and state universities, divide into sections so that each profession talks to itself. Except for the "Inter-Professions Conference on Education for Professional Responsibility," held at Buck Hill Falls, Pennsylvania, in 1948, little has been done to bring the professional educators together. That conference "was planned because it had become increasingly clear that the major problems of professional education are common to all professions, and that unusual opportunities for fruitful discussion of these problems are provided by the variety of experience of teachers in different professions."¹⁰ These beliefs are no less significant today.

A single conference, fruitful as the 1948 conference was, is not sufficient. The problems of professional education change as the professions and the society they serve change also. An annual conference could give continuity from one year to the next, making it possible to deal with a small number of major problems each year rather than tackling them all. Furthermore, it would be possible to rotate the participants so that the influence of the conferences could permeate a good proportion of the educators for the professions after a period of years.

Such an annual conference would require planning and financing. Both could be supplied by the professions. If as many as twenty professions wished to participate, each could be responsible in turn for organizing and financing one annual conference every twenty years. At that interval, the work and costs would not be burdensome. Planning for the conference could be done under the direction of a committee composed of a representative of each profession, with the profession re-

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sponsible for that year preparing proposals for review by the committee. Each profession could be responsible for the expenses of its delegates to the committee and to the conference.

Each profession, through its education agency, could designate its participants in a number not to exceed, say, ten. It could assure that its broader membership would receive information from the conference by publishing reports from its participants in its appropriate journal. If possible, the papers and discussions should be published as a separate volume, which as they accumulated would become an invaluable source of information and ideas on professional education.

Some special effort would be needed to organize the conference and get it going. If some one profession were willing to assume the initial responsibility of proposing such an annual conference to the others, it could probably find foundations who have supported professional education interested enough to finance the work required to initiate the conferences. Once established, they should be able to carry themselves without further outside support. They would more than repay the effort required to establish and conduct them.

FINAL COMMENTS

When education for each of the professions is compared with that for the others, differences and similarities become clear. Education for each profession is different—in curriculum, in instructional methods, in selection of faculty, in choice of students, and in many other of the procedures which grow out of its aims and objectives. Education for each profession is different also in its degree of sophistication and maturity, in other words, in the distance it has moved from apprenticeship in its effort to combine apprenticeship with academic education. Education for each profession is different also in its status and

acceptance within the university, and in its recognition by the public.

But different as each field of professional education may be, the similarities are more significant. All fields of professional education are touched with "divine discontent." None is satisfied with what it is doing. Each is certain that there are better ways than it has yet found to accomplish its aims and objectives. Experimentation is common and review is frequent. National studies have stimulated self-conscious analysis in many fields to define needed improvements.

Educators in the professions bring to their tasks a high seriousness which derives from their responsibility to staff a society increasingly dependent upon specialists. Their seriousness impels them to provide breadth as well as depth of learning by helping their students investigate the world as well as the professions. They have set themselves the difficult task of making men as well as professionals. In so doing, they have come to adopt, almost uniformly, broad aims and objectives which controvert the accusation that professional schools value only vocational competence. Finally, they are commonly remaking professional education in the image of the sciences which underly it, so that students can obtain a professional competence which is flexible enough to satisfy the present and to encompass the future, when the requirements of any one profession may be greatly different from those of the present. They are expanding the intellectual content and enlarging the place of research in professional education, shaping it into an instrument to produce men and women who can hope to become pioneers of knowledge as well as masters of practice.

PATTERNS OF PROFESSIONAL EDUCATION

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